Washington State Department of Revenue

Business Licensing Service

System Replacement Study

Current State Assessment

October 19, 2012

Contents

Version Control

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1.2	Draft for DOR review	09/12/12	David Casey
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1 Introduction

The assessment of the BLS current state is critical to understanding the licensing process and supporting technology. The results of this assessment will be used to help identify areas for improvement and high-level requirements during the Future Vision phase of this project.

1.1 Purpose

The BLS Current State Assessment document is produced as a deliverable of the Washington State Department of Revenue BLS System Replacement Study Project. This document describes the assessed current state of the existing Business Licensing Service (BLS) system from a functional and technical perspective. This document also provides lists of challenges and opportunities within each business process area.

1.2 Scope

The scope of work completed during this assessment phase of the project involves the tasks required to accomplish a high-level business and technical evaluation of the current BLS system. Improvement solutions are included as recommendations for consideration. The content of this document does not involve the results of solution decision making tasks; this document serves as input for the Project's next steps.

2 Document Organization

This document is divided into the following sections:

- Section 1: Introduction – This section describes the purpose and scope of the deliverable and its context within the Project.
- Section 2: Document Organization – This section describes the content and organization of the document.
- Section 3: Summary – This section provides an executive summary of the findings and recommendations of the Current State Assessment.
- Section 4: Approach – This section describes the approach the team took to become familiar with and document the current state.
- Section 5: Business Processes – This section describes the current processes of the Washington State Business Licensing Service from a functional perspective. It contains process diagrams and process challenges and opportunities.
- Section 6: Partner Assessment – This section provides a summary of the RSI findings and information gathered in partner workshops and through a survey.
- Section 7: Technical Architecture – This section presents a summary view of the hardware, software, and systems supporting the BLS program.

3 Summary

Beginning in late July 2012, the RSI team began a current state assessment of the BLS system. First the team met with key stakeholders and process owners to better understand the objectives of the BLS System Replacement Study. The team then spent nearly two weeks meeting with each functional group within BLS to learn how they use the system and the details around the licensing process. In all, the team met with more than 35 BLS staff and saw demonstrations of the BLS system, imaging, cashiering, and customer service. The team also met with technical architects and system owners who provided information on the data model and management, software applications, technology platform and security. Finally, the team conducted a Stakeholder Survey and Partner Workshops, gathering input from more than 50 BLS system users.

Out of these discussions and surveys, the team documented the processes and system architecture presented in this document. Furthermore, the team learned of several issues and opportunities, also documented here, that will be categorized and addressed in the Future Vision tasks.

3.1 BLS Functions

The RSI team found that the BLS supports four major functions throughout the licensing lifecycle. These four major functions are represented below in Figure 3.1.

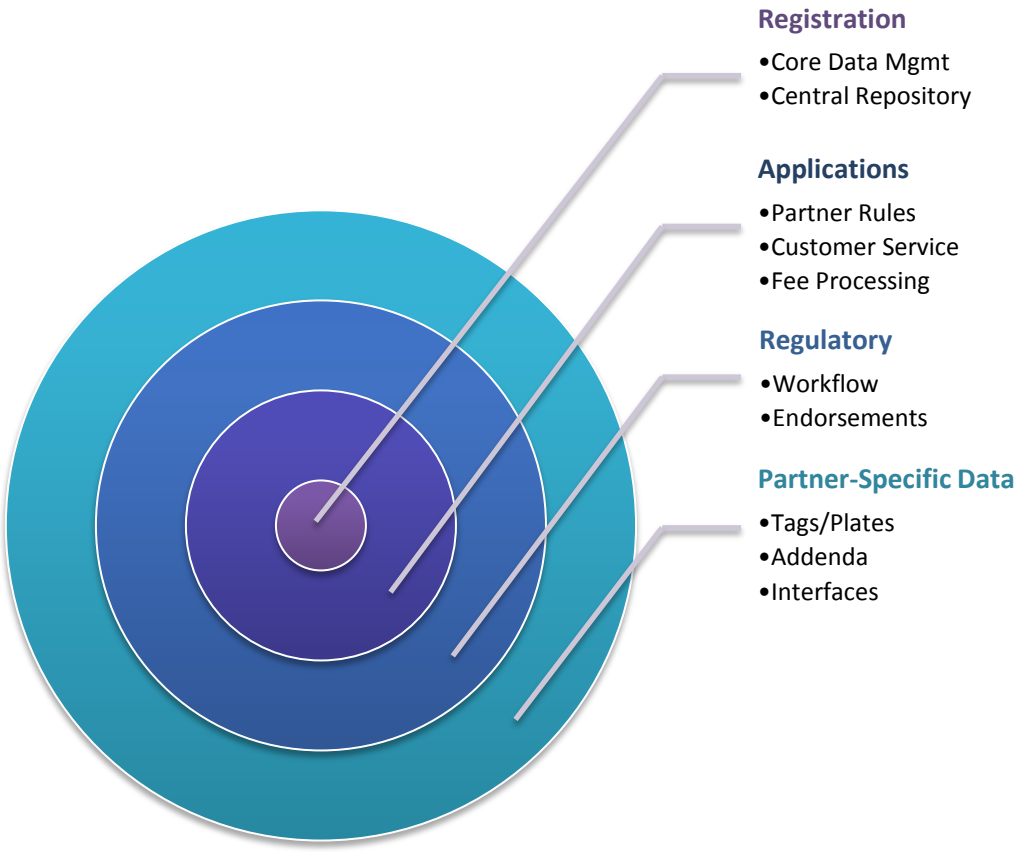


Figure 3.1 BLS System Functions – As depicted, centralized functions have expanded beyond a core data repository to support more detailed licensing requirements.

Registration – The Registration function is designed to provide the central licensing data repository for participating state agencies and municipalities. Data quality and consistency are initially managed here as most partners access the data through various interfaces. However, the consistent use of the repository among partners breaks down after the initial application is processed. All municipal and most state agency users rely on the central repository, but some state agencies prefer to take the data from the initial application and manage their own master data independently. This can result in confusion as to who "owns" the business data (e.g., accurate addresses, current licenses, etc.).

Applications – The Applications function is designed to guide the business through the licensing process for partners and to complete the application transaction. BLS provides customer service support, processes electronic and paper applications, accounts for and distributes fees, and manages the renewal notices and processing. Nearly all partners rely on this function and recognize this as the greatest area of benefit from a centralized BLS.

Regulatory – Regulatory actions are the responsibility of the specific partner to determine whether or not a business has complied with the partner's licensing requirements. Through the application process, BLS determines which licenses are required for a business and captures the information that may be needed by partners to determine compliance, but the regulatory review lies with the partners; the partners are responsible for the regulations, but BLS provides the platform to support the process.

Partner-Specific Data – As a core component of the centralized business data/information, BLS partners may maintain license-specific data when the regulatory rules require unique information or processes not used by any other partners. This is most common among state agency-regulated licenses, but may involve municipalities as well. A typical example of this is Dealer Plates data which is regulated by the Motor Vehicle Dealer & Manufacturer program of the Department of Licensing. The dealer vehicle demonstration plates are an integral part of the regulation of the dealer licenses, but are not a process or requirement shared by any other current partner. However, other regulatory partners may have similar, unique license-specific data and processing needs demanded by their specific regulatory rules.

3.2 BLS Scope

Through discussing and examining the BLS functions, the RSI team determined that the current BLS scope crosses from Transaction Broker to Business Function Owner. This has been a development of meeting each partner's specific licensing needs or capabilities, or appropriateness for functionality to be placed within BLS. This is a significant observation in that the scope and requirements of the future system need to take into account these various roles that have been dictated by historical priorities of service to businesses and regulators and simplification of the process to those external stakeholders. Figure 3.2 presents examples of each role within the BLS functions.

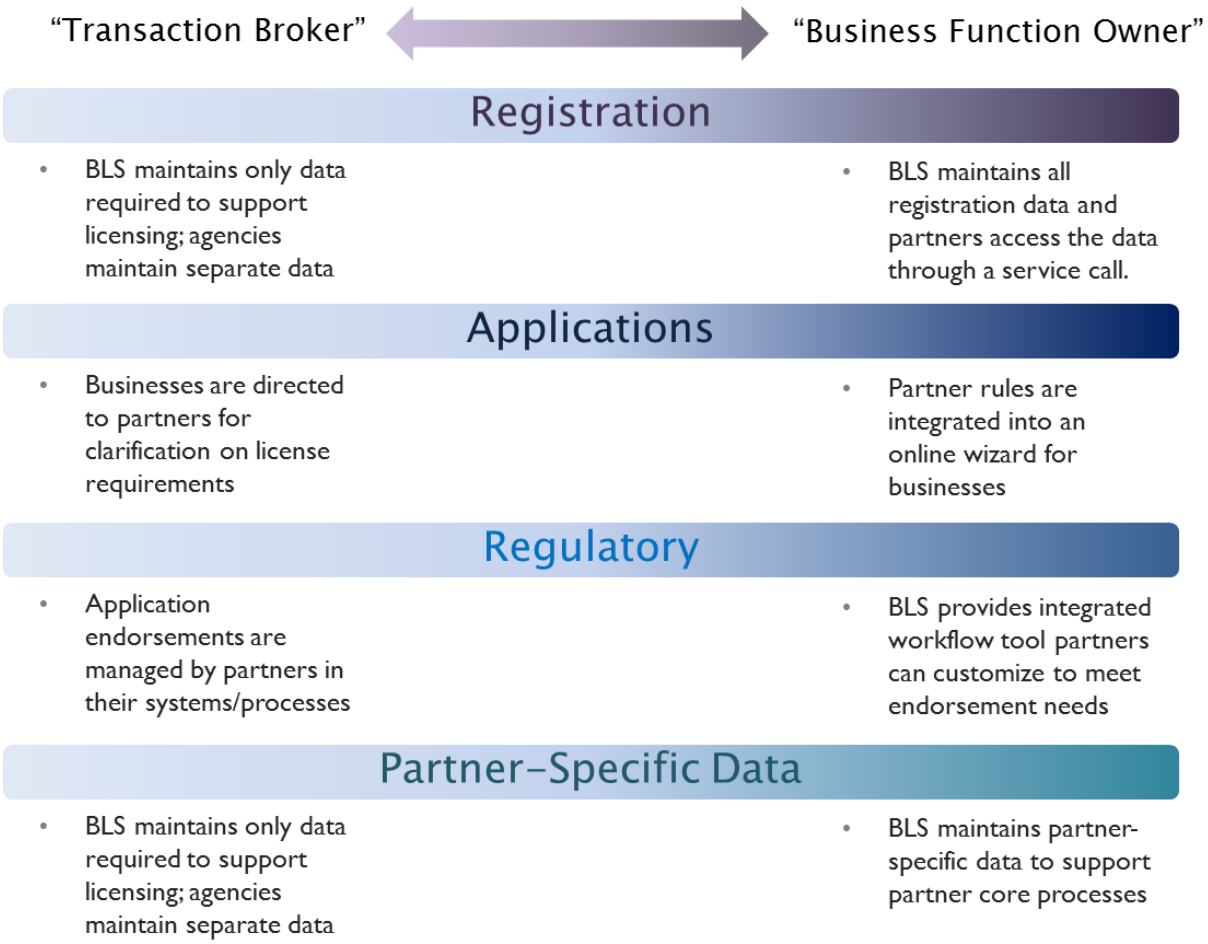


Figure 3.2 BLS Roles – Transaction v. Business

3.3 BLS Challenges

While the BLS System successfully provides basic business registration, accounting, and renewal functionality, it is clear from interviews with BLS staff and users that there are many challenges. Some of the higher level, statewide challenges are covered in the State Auditor's Office "Master License Service Performance Audit." This audit document refers to performance challenges such as: 1) the inability of the system to expand for new licenses and partners, 2) a lack of a long-term growth and financial plan, and 3) the need to include Secretary of State corporate registrations in the process. This information was used by RSI when reviewing the strategic objectives for the BLS.

This Current State Assessment concentrated on more detailed process and technical challenges facing businesses, system users, and partner agencies and cities. These challenges are presented in detail in each of the sections of the report, and are summarized below.

Impacted Group	Challenges
Businesses	• BLS is not a true one-stop service for businesses; businesses may be required to contact the Secretary of State, non-participating State Agencies, and non-participating cities to complete registrations for all applicable government licenses. • The online business license application is cumbersome to use when a business is licensing multiple locations. • The BLS move to DOR has resulted in lengthening the process time for some licenses (e.g., Limousines for Hire).
BLS Partners	• The old DOS-based system is "clunky," and it is difficult to train staff how to use. • Transferring registration and renewal data between the BLS and partners varies from direct interfaces to email to manual data entry, resulting in complicated work processes.
BLS Staff	• Training BLS staff to efficiently use the system and support partners and businesses can take upwards of one year. • The BLS System often requires staff to print emails and documents, send them to the imaging system, and then work from the images. • Financial accounting requires significant manual intervention and reconciliation, resulting in potential points of failure.

Impacted Group	Challenges
BLS Technical Team	• Supporting city, agency, and legislative changes is an arduous process complicated by aging technology, hard-coded business rules, and a diminishing number of staff with the needed technical skills. • Business/Corporation data (entity, address, location, etc.) is spread across BLS and BRMS creating synchronization issues that lead to reduced data quality. This problem also exists outside DOR/BLS to other agencies that manage Business/Corporate information.

4 Approach

4.1 Review the Strategic Objective of the BLS

The RSI team undertook two activities to better understand the BLS Strategic Objectives: 1) Reviewed existing documentation; and 2) met with DOR leadership.

The DOR team populated the team SharePoint site with dozens of documents ranging from previous studies to improvement opportunity meeting minutes to business process designs, all of which helped clarify the transition of the BLS system to DOR and the current challenges DOR is facing. The RSI team prepared a document inventory tracking sheet identifying the documents on SharePoint and describing the contents.

The team also met with DOR leadership to discuss how the DOR's strategic objectives are met, or not met, by the existing BLS processes and technology. RSI framed the discussion using existing strategic plan documents and the State Auditor's Office "Master License Service Performance Audit." This task helped to confirm the direction of the Current State assessment.

4.2 Conduct System and Process Demonstrations

To gain an initial understanding of the current state, the RSI team shadowed staff conducting their daily business, studied existing documentation of the current systems and current business functions, and reviewed applicable technical artifacts. Agency staff spent numerous hours demonstrating system functions and business processes, and answering scores of detailed questions. The documentation review included the artifacts provided by the Agency, and in some cases authored by outside consultants. For the most part, these studies are not individually cited; however, RSI has done its best to cite when specific studies by outside consultants were used in the analysis.

4.3 Stakeholder Assessments

The RSI team assessed stakeholder use and opinions of the BLS system through a Stakeholder Survey and Partner Workshops. Forty-three respondents completed the Stakeholder Survey, which consisted of 19 questions asking agency and city users about their interaction with the system and the overall BLS program. Through Partner Workshops, RSI met with representatives from five agencies and ten cities, providing a variety of user experiences and relationships with BLS. During the workshops, partner representatives discussed how they used the BLS system to support licensing, and they were encouraged to offer opportunities and issues for consideration. Meeting minutes for all Partner Workshops and the results of the Stakeholder Assessments are located on the DOR SharePoint site.

4.4 Conduct Technical Architecture Review

In addition to the "staff shadowing" accomplished during the system and process demonstrations, independent interview sessions were conducted with DOR IS staff to gain insight and details about the Infrastructure, Network, Security, and existing systems in the BLS environment. Key integration points (data exchange) between BLS and the Core Tax Systems were also analyzed to identify technical structure and potential opportunities. Technical information provided by DOR/BLS staff was added to the DOR SharePoint site to support this report.

5 Business Processes

The BLS business processes, in their current state, are described below. In the context of this Current State Assessment, it's important to note that our assessment, documentation, and interpretation of the current business processes are intended to support the formulation of the future vision for BLS and to support the DOR's decision to proceed with a replacement project. We did not attempt to document the current state business processes at the level one might expect (for example) in a training manual. The sub-processes we documented in the BLS business flow include:

- Customer Service
  - Front Counter
  - Call Center
- Document Handling & Imaging
- Application Processing
- Renewal Processing
- Cash Management & Revenue Accounting

5.1 Customer Service

5.1.1 Front Counter

Business owners may hand deliver to the BLS front counter their applications, renewals or changes for processing. They are also given the option of entering the information online using one of the public computers provided in the lobby. If there is no form (e.g., an address or name change), staff prints out the account information and provides it to the business owner to mark up the change, date and sign, authorizing the change. This paper process is required to provide an audit trail and authorization by the business owner.

Staff reviews the documents to ensure they are complete and then collects the fees from the business owner. They enter the payment information into the DOR Cash Management receipting system that is separate from the BLS system and print out a receipt. They stamp the receipt with "Received," make a copy, and give the original to the business owner. The copy goes with the money as the payment document.

At the end of the day, counter staff takes any cash they have received to a bank to convert it to a cashier's check. They then send all checks and the documents to Cash Management. Cash Management validates the remittance amounts, prints a remittance validation line on the back of the check and onto the respective document, and prepares the bank deposit of the payments. The validation data is passed electronically to the BLS system, but is not at that time yet linked in the BLS system to the specific document filing. The original documents are sent to the document scanning process.

Once the documents are imaged, the imaging system places the images into the appropriate BLS system workflow queue (original paper documents are disposed of after the image scanning process). BLS staff access the workflow queues to process a filing, and, along with the specific filing's transaction information, enters the validation number that was printed on the document and appears on the image.

Money that is received without a document has a photocopy of the remittance made into a separate document which is then sent for scanning along with other paper documents. The miscellaneous money document is routed to the Miscellaneous Money image workflow queue. BLS staff accesses the queue and researches and identifies the proper licensee account using the fully-qualified Unified Business Identifier (UBI and location ID numbers) and purpose to which it should apply.

Staff access DOR BRMS and BLS to determine the correct UBI number. If there are issues in resolving the transaction, it is sent to a "delay" queue for further research after the daily work is completed. Once staff determines the UBI for the money, they review the list of applications for the account, to determine which application or license the money is intended to pay. They then process the payment accordingly.

If the payment is for a renewal but is late, and the late renewal penalty amount was not included, they generate a Request for Payment (RFP) for the late payment penalty.

If they resolve the UBI issue but discover the business owner does not owe anything (e.g., the payment is a duplicate payment), staff initiate a refund.

In cases where after researching the payment it is discovered the money was remitted to BLS in error, but the appropriate destination can be determined, BLS supervisors can initiate the electronic distribution of that remittance via a "Journal Voucher" (JV) transaction.

If no RFP, everything is paid, and business is a corporation or LLC, and the money is a duplicate for a LLC or Corp renewal, staff is able to initiate a refund. They go into BLS as if it is a renewal and can refund from there. This was created due to the large amount of duplicate fees paid for corporation or LLC renewals. Most other refunds must be sent to a supervisor to issue a refund if the entire amount of a remittance must be refunded without needing to have had a filing processed for a business licensee account.

The counter staff may issue a temporary license. They obtain the applicable fees from the business owner and enter the essential information into the BLS system. A temporary application ID number is issued for the transaction as a placeholder until the actual application ID is issued through the normal cash management and document imaging processes. They can then print the temporary license for the business owner. The document and payment from that filing are then routed through the normal channels for processing of filings received through the front counter. When processed, the actual application ID will replace the temporary number that had been issued to the filing at the front counter to print the temporary license.

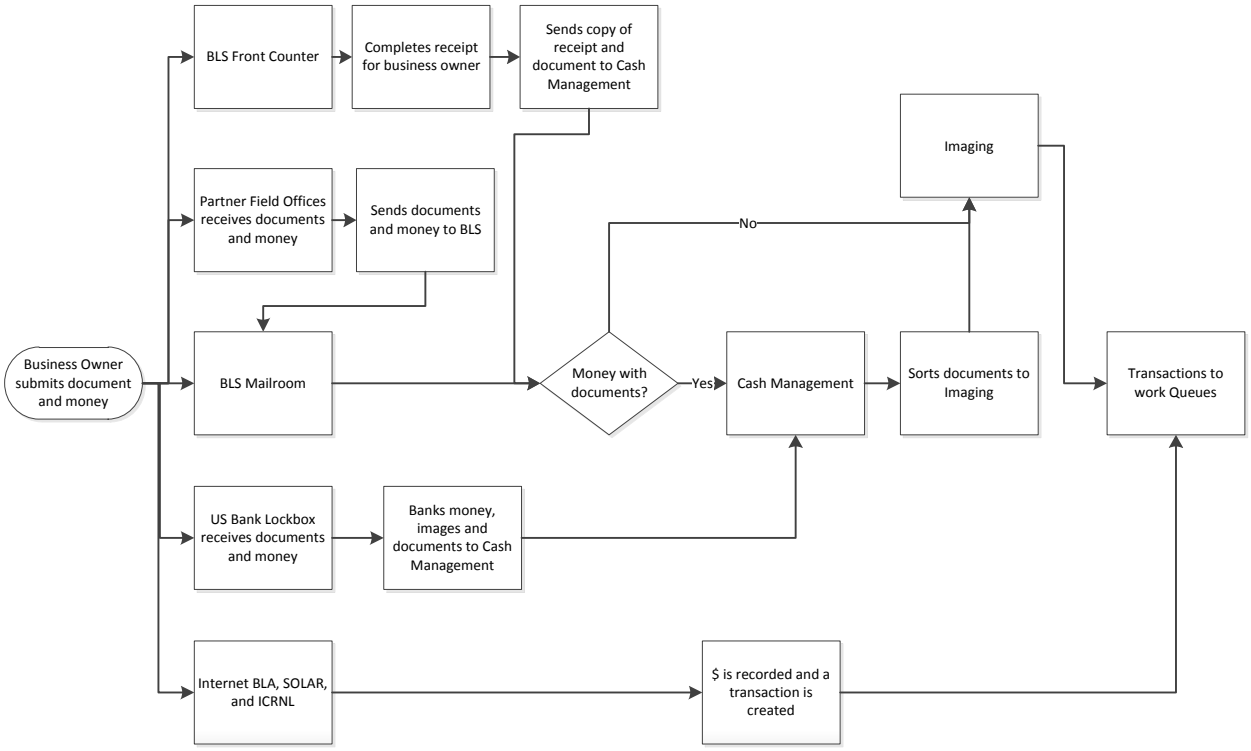
5.1.2 Call Center

Calls from business owners regarding the application and processes are directed to the Call Center. There is an automated system that routes the calls to the next available staff person. Staff asks for the UBI of the caller so they can access their BLS account. They answer the caller's questions and provide links and information as appropriate. They use the Washington License Information screens (WALI) to generate an order for paper brochures and forms to be sent to the callers when necessary. They have other tables and sources for information, both online and hard copies.

Challenges	Opportunities
Counter staff print out a receipt and then stamp it with "Received". This is redundant.	Discontinue. The definition of receipt is acknowledgement of receipt. Make sure receipt is clear with amount due, amount received and balance due 0.
The websites are not easily navigable for business and wording is not consistent from page to page. Business owners often cannot find the business application because they go to DOL's website. Business owners sometimes do not understand the wording on the website regarding "IE 6.0".	Use a consistent user interface that employs current and expected web interface best practices.

Challenges	Opportunities
Staff cannot take changes over the phone because a signature is required.	Allow staff to accept some changes via phone, with appropriate business verification practices.
There is no current process to capture the types of questions and/or standard responses.	
Staff does not have access to the online application view for cities, which would help them when answering specific city questions.	
Staff must ask the caller for the UBI number at the beginning of each call.	Integrated IVR system with UBI captured beforehand.
BLS staff cannot secure and process cash payment transactions as part of the routine cashiering and deposit process. They must convert cash to check before the payments can be included in a BLS deposit.	
To fax license and renewal documents to a caller, staff must "select all", copy, and paste to Adobe for the fax write functionality. This is available only for one-page renewals. To fax a license or renewal with multiple pages, staff has to print the license or renewal and manually fax it.	
Limousine and For Hire (Taxis) cannot do applications or renewals online. Staff used to be able to issue the decal and certificate the same day the applicants applied but now the process has to wait for DOL to approve, which may be 2 – 3 weeks before it is in the hands of the business owner. This is because the application must first be imaged (2-3 days), then sent back to appropriate work queue to apply payment (1-2 days), then sent to DOL for regulatory approval (1-2 weeks depending on DOL workload and staffing).	

5.2 Document Handling and Imaging



Business owners hand deliver, fax, mail, or go online to submit their Business License Application (BLA) and addenda, renewals and changes. Paper forms and payments may be received at most of the partners' field offices. These are forwarded to BLS for processing. Business location and Legal Entity Renewals that have the automated filing coupon attached are sent to the US Bank Lockbox by the licensees filing a paper renewal. The bank will image and process the checks and coupons. They then send the forms and the images of the coupons and checks to BLS along with the remittance validation electronic data file that will be loaded into the BLS system. Cash Management creates two remittance validation files daily, one with money received from the Cash Management Unit and the other with money received from US Bank. These files are uploaded to the mainframe every work day evening. The file from US Bank includes information from OCR coding on the payment coupon (UBI, expiration date), which enables the system to auto link the payment information to the application being processed by the transaction.

The filings from the U.S. Bank Lockbox received at BLS are sent to the Imaging Unit along with the other paper filings received at DOR through the mail or at the front counter and that were handled through Cash Management. The Imaging Unit sorts the documents into appropriate batches, based on the type of document. The documents are prepped for scanning; removing staples, numbering pages, and adding document separator sheets to signify the start of a new document. The batches are then released to be scanned, which is a once daily process.

The scanner operator enters the appropriate category, class and route for the batch and then runs the batch through the scanner. The scanner will read bar codes if the form has one. The batch is run through Quality Control to ensure the images were captured correctly and there are no issues with reading the bar code.

Once the documents pass Quality Control, the batch is released into the imaging system and the work queues. Upon release, documents are assigned an application ID on the mainframe.

Older documents not currently on imaging are retained on microfilm. These reels must be retained if there is any document belonging to an account that is still active on the reel. For example, if an account was established in 1975 and they are still active today, if a reel had an address change for that account, BLS would be required to retain the reel. Also, the public records laws require maintaining the actual records as long as there is an index of those records maintained. The BLS system's database maintains the transaction history of all the filings that have been processed, which is the functional index to the respective filings' public records – both those recorded on microfilm as well as the current imaging system. Consequently as long as the BLS system's index to the microfilm exists, the microfilm records must be maintained even though some of the accounts' filings recorded on the microfilm may no longer be active.

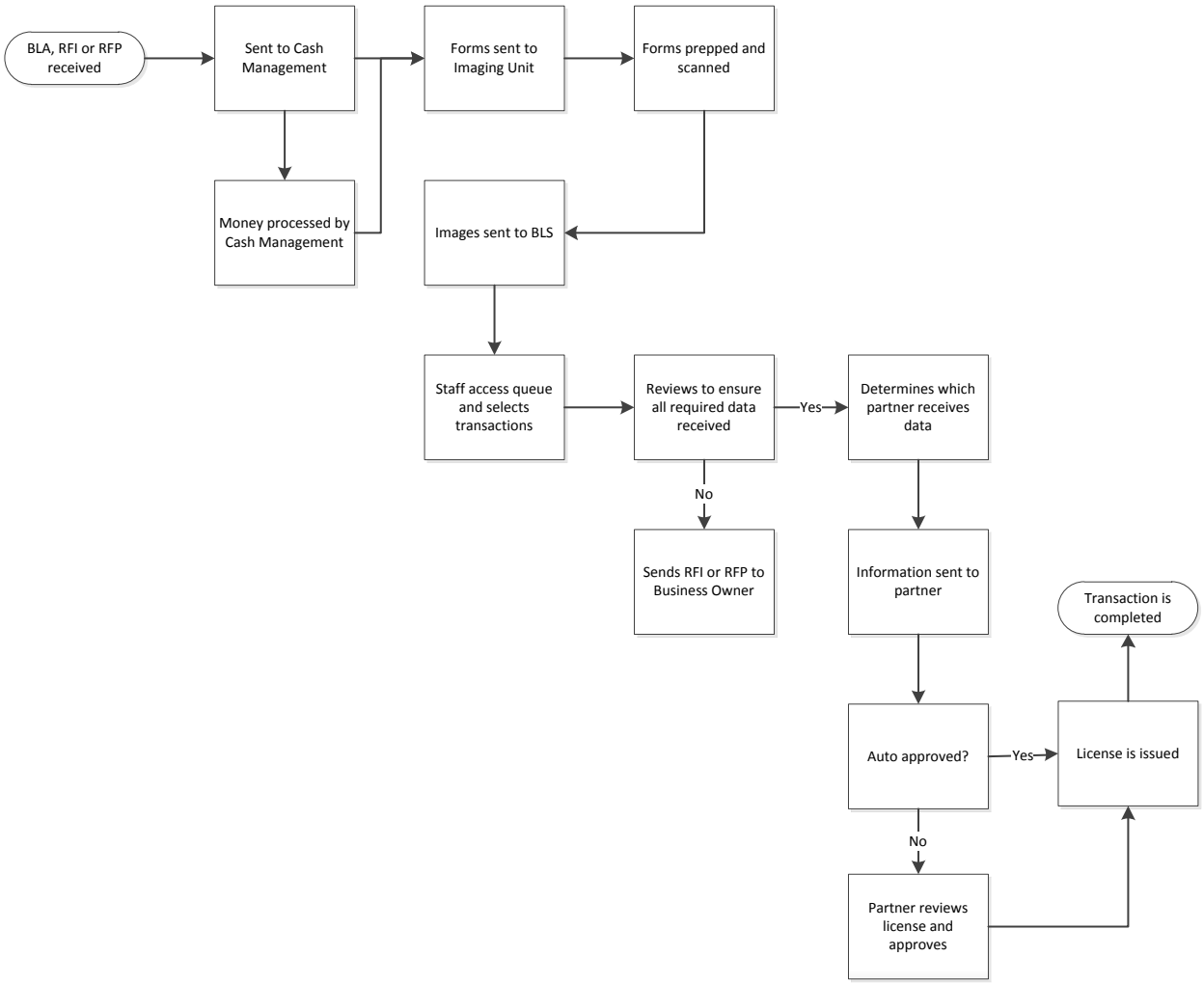
Requests for forms, applications and information that were compiled through the call center or BLS staff through entry into the WALI system are printed out and filled by staff. Though business owners can request the forms to be faxed, this is rare as there are normally multiple pages to be transmitted. The system also prints out a label for mailing the requested documents.

Business owners can also access the public, web version of WALI called the Business Licensing Guide (BLG) that will provide for hyperlinked downloads of the appropriate forms, or allow the business person to request the forms to be mailed or faxed, which involves some staff time. Again, requests for faxing are rare as there are normally multiple pages to be transmitted. Some of the forms or informational packets are very large and can only be provided as a mailout to the requestor.

Business owners and other lawfully authorized entities may request copies of documents on file with BLS. These requests are channeled through the public disclosure staff that will coordinate with the imaging staff to research the imaging system and the microfilm reels to gather the requested documents and mail them to the business owner or other entity, such as the courts or federal prosecutors, etc. There is currently no charge for this service.

Challenges	**Opportunities**
Work flow and queues in BLS are only supported by the imaging system. As a result, all documents must be imaged to initiate work processes; this includes email and other electronic documents that must first be printed and then scanned. Note: the Internet transactions which require human review are also placed in work flow queues.	BLS should promote/require online applications and renewals to limit imaged documents. The online application service needs the ability for the business owner to scan and upload additional documentation required.
Imaging of BLS documents is much more time consuming than for other DOR, tax-related documents; DOR has two distinct processes and systems for imaging, of which BLS is the most cumbersome.	DOR should look to leverage the more efficient, tax-related imaging process to improve BLS.
Faxes are sent to be imaged and then processed into the queues.	Need a dedicated fax line into a fax server.
Microfilm reels must be retained if there is any active business on it. Since they can't purge they've kept them all.	Need to convert microfilm to digital, or make other changes in keeping with the public records act that may allow the disposal of the older records.

5.3 Application



After the applications are imaged, the imaging system sends the application IDs of the images of the applications to the work queues.

There are multiple queues depending on the types of licenses and filing documents received. They are processed virtually the same; there are different questions and data on the applications depending on the type. For many of the endorsements and licenses, supplemental forms besides the BLA are required.

The first step in processing the BLA is to assign or verify the UBI. Staff accesses the DOR BRMS and BLS screens to determine the UBI for the application. If the business owner does not have a UBI, they assign one using the UBI screens.

Staff enters the validation number from the money remittance into the BLS application transaction. This ties the money to the application. If there is no money or the total owed for the BLA is not included, they generate a RFP. If there is too much money, they enter a code which generates information for a refund sent to Financial. Nearly all of the processing is automated based on the rules programmed into the BLS system; the entry of the essential information by the BLS operators allows the programming to make those automated determinations. The determination of the correct fee amounts is also dependent on the

entry of some of the information from the application such as how many units of a particular type are associated with a particular license being requested. Also, likewise, if the data entered for the application indicates excess money was remitted, the excess is identified by the system as an overpayment amount that will be refunded to the applicant.

Staff keys the data from the application into the BLS system. Different information is required depending on the type of licenses and endorsements. If there is missing information staff generates a Request for Information (RFI). For incomplete applications, the immediate transaction continues to conclusion, but the application is not considered complete yet, and the license is not issued. The response from the business will re-initiate the process for the respective incomplete application (see below).

If there are any pass through documents (documents that need to be printed and the original is sent to the partner), these would have been identified during the scanning phase and the original documents will be delivered to the BLS production area. The application IDs of the images for applications that had pass-through documents included will be placed into a separate 'pass-through' work flow queue. As BLS operators process the applications from the pass-through queue, they will access the original documents delivered by the scanning team in order to ensure they are properly set-up to be sent to the appropriate partner. Occasionally, the BLS operators will find that a pass-through had not been identified during scanning or an incorrect original document was delivered to the production area. When necessary, BLS operators will also print the document that is the actual pass-through; the original documents are delivered to the production unit. The pass-throughs consist of documents that are required by law to be original. (i.e., Fingerprint cards, bonds). Once processed, the documents are put in the mail to the appropriate partner. Staff may determine the application requires a special processing or review by management. They may route the document to the appropriate person or queue.

When the transaction is complete, they determine which partners have requested or need the information and enter the appropriate code on the transaction. In some instances, rules in BLS determine routing, but this is not always the case for more complex applications; staff knowledge is required to direct some applications and addenda. The system will send the information on an Agency Required Document (ARD) file or form. Some partners read the entire ARD file and select the records they are interested in. Others receive subset files containing records of interest to them. These subset files may be tab delimited, comma delimited, a multi record type flat file or XML. Subset files are sent via secure file transfer (SFT). BLS system has the flexibility to accommodate a Word document via SFT. ARDs are preliminary (transaction is missing information or payment) or final (transaction is complete). Most partners receive only final ARDs.

If the operator processing the transaction believes that one or more partners require the actual document for review, they select the pertinent partners. Table driven rules define the manner in which each partner receives these notifications. The options are: email notification with a link to the Imaging site; document image in .tif format sent via SFT; data file with document information (L&I uses this to route documents to the appropriate team); printed on paper and mailed; partner requests no notifications.

The transaction is complete at this time, though the application may not result in a license being issued. If an RFI or RFP was issued, the application is not complete, and will be completed if and when a reply is received from the business owner. That document will complete the previous filing transaction and be connected to the original filing through the BLS system. Also, some licenses require review and approval by a partner. The license endorsement will remain in a pending status until then, and that endorsement will not print on the license document until approved, even where a license caused to be printed through the system.

After this point (for completed applications) the license will be generated and mailed to the business owner if the application is complete and there are no "required" licenses or endorsements that have not yet been approved. If there are, the system does not issue the license until the partner approves or denies the endorsement. The daily license requests are batched, the license documents printed once each week

through CTS, after close of business on Friday, and mailed through Consolidated Mail Services (CMS) usually by the following Tuesday.

The partners receive the ARDs alerting them to the accounts needing review and approval. They will also receive a report showing the transactions waiting for their approval if they have been waiting in a pending status for a preset time in the system, which varies depending on the type of issue needing review. The partners enter the special subsystem created for them specifically in the BLS system, open their queue through which they may select the pending transactions, and approve each, or take other actions as may be necessary. Once they've determined the appropriate action, they enter the appropriate code into the BLS system. Once approved, the license endorsement is released to print on the license document at the next scheduled printing date.

If after an application has been completed, and the applicant decides to cancel a license, the applicant must submit a written request (or email, etc.). When received, either the BLS operator or the respective partner, whichever is appropriate, can withdraw the application. Otherwise, after a license has been approved, but the license document not yet issued, the respective endorsement can still be terminated to avoid printing it on the license. Note: there are similar processes for renewals: If a business owner later decides to cancel a license, and are filing a paper renewal, they can provide the information in writing by marking the renewal notice accordingly and returning it to BLS for processing. If the licensee is filing an online renewal, they have the option of indicating which of their licenses they do not wish to renew, and the system will initiate the cancellation process and alert the respective partner of the change. If the application has not been processed yet, they link the documents to the UBI number and refund any fees that were paid.

Online BLA

The online application system allows 'anonymous' filings, that is an applicant does not need to have their identity verified in order to submit an application. The applicant does, however, need to register as a user in the online system. Once registered, the system presents the application questions. The path and questions the business owner will be asked are based on the answers to previous questions.

If the applicant does not complete the application during that session, the online system will retain whatever data was entered to the point of closing the session. The applicant then has approximately 30 days to reenter the system using the user ID and password previously created in order to complete the filing. Each reentry into that incomplete application restarts the 30-day clock, and a filing may have been started much earlier if repeated restarts were made thereafter. If the applicant does not reenter the application within the maximum time required, after 30 days the data for the incomplete application is purged.

At the end of the application, the business owner is presented with the total due based on their answers and licenses required. There are some fees that vary based on the specific situation. The system will assume the highest fee in calculating the amount for which the business owners "authorize". The "amount due" presented at the end of the application may not be the final amount due, which will not be determined until the final processing is completed in the BLS mainframe system. After the application is processed in the mainframe system, the business owner will receive a letter informing them of any changes to the amount actually billed to their credit account. The credit/debit or e-check charge is finalized after the application is sent to and processed in the BLS system.

The data from the online application is sent to a queue for staff processing. Staff reviews the application and verifies the data. If there are comments that require further action, they print out the comments and send them to be imaged and entered into the appropriate queue. Some online applications require further handling, such as when a particular license is indicated that could not be completed through an online filing. In such instances, the BLS operator begins the supplemental online application process (SMBA).

RFI and RFP answers

RFPs will be returned with a remittance, and will be sent through Cash Management as is any other filing with money. Both RFIs and RFPs are sent for imaging. After imaging, these documents are loaded into a queue specific for RFIs and RFPs. They have bar codes for the scanner to read the UBI and the original application ID. Staff opens the document and enters the appropriate information. If they have all required money and information, they complete the processing of the application. An RFI answer may resolve an RFP; in these cases staff may delete the RFP. If staff cannot resolve the issue or apply the payment properly, they may send the adjustment to a supervisor for resolution.

Addenda Forms

Addendums are filed with the BLA. The addendum is a form that requests additional information that a partner is requesting.

Location Addendum

When a business is applying for multiple locations at one time, they have the option to fill out a BLA for the first location and location addendums (1 page) for the additional locations. There is a $15.00 application processing fee for each location.

Supplemental BLA

This can be used in place of a BLA if the business is making changes or adding licenses to an existing location. This is only acceptable if BLS has received a completed BLA within the last 30 days.

When an applicant filing a paper application requests a particular license that requires the filing of information unique to that license, and not already collected on the main BLA form, the applicant must also include the appropriate addendum form. If multiple such licenses are requested on the application filing, each respective addendum must be included. The respective addenda are considered to be part of the BLA filing. The system's business rules related to each license endorsement requested will recognize when the unique information that would be submitted by the addendum form is missing and create an RFI for that information. Note that the various addenda are incorporated into the IBLA system as an integral part of the license 'wizard' portion of the application. When the online applicant indicates the various licenses being requested, the online system will prepare to display the appropriate screens to collect that 'addendum' information related to each specific license endorsement. (Renewal transactions also collect 'addendum' information as appropriate; however, the 'addendum' questions are incorporated into the combined renewal notice in a custom print package without needing additional forms to be attached. Likewise, the online renewal system will request such license-specific information through the respective license renewal screens.)

If an applicant wants to file nearly identical applications for a number of different business locations at the same time, in the paper process there is a shortened version of the main BLS form called the location addendum that will allow the applicant to submit only that information unique to that business location (like the physical address, and perhaps different firm name, etc.) without having to re-supply the common, essential business information for each location. However, the applicant must still file one complete BLA in order to use the location addenda, and each such shortened location addendum must still have its respective license addenda included if a specific license requested for a particular location requires the unique information. Otherwise, if a business owner is subsequently expanding the business to an additional new location, the business owner must file a complete BLA form with the appropriate license addenda as needed. Note: The shortened location addendum filing is not available through the IBLA. When filing for multiple locations online, each location will require going through the entire application filing process each time. An exception ***may*** be made requiring a full paper BLA submission if the filing of a subsequent application occurs within 30 days of the original filing. The system has "fast paths" for additional locations (origination and renewal) that populates database fields with information from the first document and bypasses common screens. For example, ownership and governing people

information needs to be entered once; location mailing addresses may be the same but physical addresses will be unique for each location.

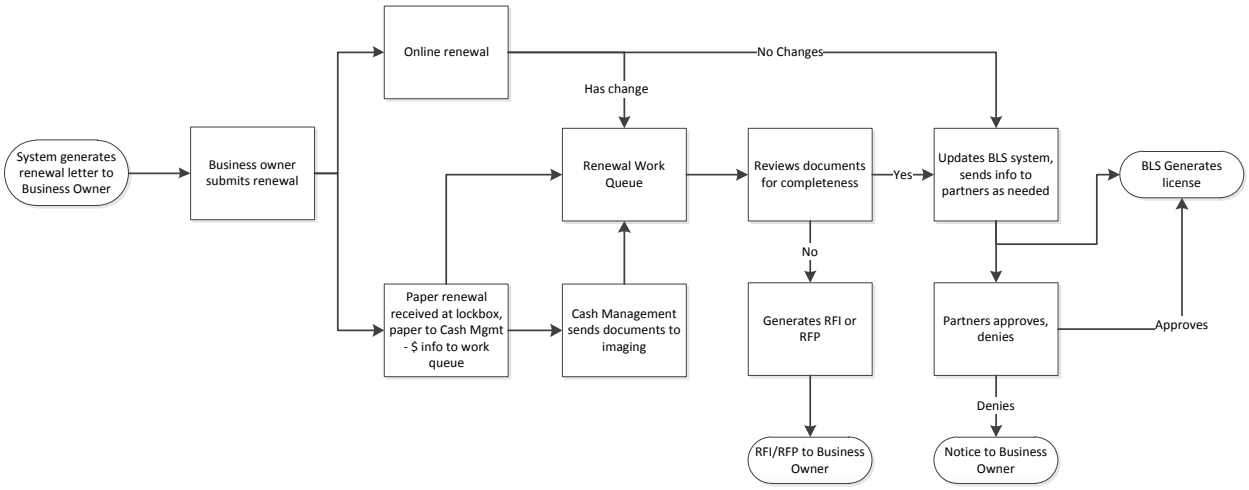
Maintenance

Changes such as address changes are routed to the Business License Maintenance (BLMA) queue. Staff review and determine the appropriate change and then update the BLS system accordingly. These documents are forwarded to the partners as appropriate. There is a system option for a mass mailing address change. The operator keys the UBI and the new mailing address, and then selects the locations which should be updated from a list.

Challenges	Opportunities
Business owners must go through an arduous process of completing the application online multiple times for multiple locations. Any addendum to the original license application can also require the business owner to complete the entire online application, repeating much of the information already provided to BLS.	Online authentication would eliminate the need for a complete filing submission and help push users to the online option.
There are many instances where the BLS staff is required to enter information that is accessible in tables or other sources. This is challenging in the training area with the vast amount of data they must remember, and increases the chances for errors.	The system needs to access easily maintained tables of the data, such as which partner should receive information re: a change or whether an address is inside or outside the city limits, to populate and process the applications.
Online BLA asks the same question in different areas, such as phone numbers and contact.	Online system needs to be interactive and populate related fields based on previous responses.
If the business owner is applying for a license endorsement on their account that has not been enabled to be renewed online, the entire renewal of that location is ineligible for renewal online.	Continue to work with existing partners to overcome roadblocks within their particular license(s) that disallow electronic/online filing.
Some questions are included on the online BLA to assist routing for LNI. It's not required for the application processing and is not maintained long-term within BLS.	Provide a flexible system that enables BLS to adapt to the individual data requirements.
Agency partners cannot clear RFIs related only to them. It has to go through BLS adding a step and more delays to the process. However, the ability to clear RFIs related only to them has been built into the subsystems for Dealer Services, Richland and Bellevue.	Future enhancements may enable greater business rules automation that will permit greater partner participation in the system as may be desired.

Challenges	Opportunities
Registration Unit staff have to remember city business rules regarding city partner requirements because these rules are not written in the system. For example when to add a city, when not to, when to create an additional location, when not to and if it is a temp business in the city that the applicant is requesting.	Increase automation of business rules and/or an easily accessed/searched index of business rules and solutions.
Specialty License Unit staff have to remember hundreds of business rules regarding partner requirements because these rules are not written into the system.	

5.4 Renewals



The BLS system generates renewal notices to send to the business owner approximately 45 days before the licenses' expiration date (on the second Saturday of the month before the expiration month). The notices have a bar code for the UBI number and renewal date as well as a tear-off "coupon" containing specific renewal information such as the UBI and fee amount due, etc. that is used by the automated processes of the US Bank Lockbox. If the business location account is eligible for renewal online, the notice also includes a URL and a "password" for online filing printed on the paper form. The business owner can choose which method they would like to use to renew (paper or online, if eligible). There are some renewals where renewing online is not an option, due to one or more licenses having other processing constraints. For example, some partners' licenses require additional documentation such as an original signature that cannot be completed in an online filing. If ineligible for online renewal, the business owner completes the form and submits it with payment.

5.4.1 Paper Renewal

Paper renewals are submitted to the US Bank Lockbox. US Bank processes the coupon and payment, banking the payment and imaging the coupon and check. The images and renewal forms are sent to BLS.

The renewal forms are sent to the Imaging Unit, where they are sorted into appropriate batches. The documents are prepped for scanning; removing staples, numbering pages, and adding document separator sheets to signify the start of a new document. The batches are then released to be scanned, which is a once daily process.

The scanning operator enters the appropriate category, class and route for the batch and then runs the batch through the scanner. The scanner will read the bar code, which designates the UBI, expiration date, and validation number. The batch is run through Quality Control to ensure the images are captured correctly and there are no issues with reading the bar code. Once the documents pass Quality Control, the batch is released into the imaging system and the work queues. Upon release, documents are assigned an application ID by the system. The expiration date and certain critical endorsements govern the order that the documents are placed in the renewal queue. Expired locations and renewals with critical endorsements float to the top of the queue so that they are worked first.

Staff accesses the renewal queue. If the payment came directly to BLS (bypassed the US Bank Lockbox) and processed through Cash Management, staff enters, into the BLS system, the validation number for the money, which was generated by and printed on the document by Cash Management. If there is no money or the total owed for the renewal is not included, and a renewal fee is due, the system generates a RFP, and the license(s) are not fully renewed until the missing payment is received.

The system verifies the document is complete by comparing the data entered by the BLS operator against the known business rules automated for the respective licenses. The renewal form may require the business owner to provide annual updates of license-related data to verify there have been no changes. Staff enters the essential information and any other license related information into the BLS renewal process. The system verifies all required information is complete, and if there is information missing, generates a RFI. Often, on the corporation renewals, business owners will enter “No Change” or “NA” instead of completing the information as is required by law. In these instances, the staff will enter the appropriate responses into the automated renewal process, and the system will generate a RFI or payment, if needed. Business owners are given the option to provide the missing information online (if the license for which the information is requested is also eligible for online renewal). Both corporation/LLC and business location renewal RFPs can be paid through the online systems even if the initial filing was started as a paper filing.

Staff determines if there is any special processing required for the renewal, based on partner business rules. If yes, they initiate that process (such as noting to have the application ID included in the ‘print queue’ for the daily automated printing of documents needing to be mailed to the respective partner(s)).

When they are finished processing the transaction, staff determines if the actual document needs to be sent to partners and enters the appropriate code on the transaction. The system knows what information is sent to partners, and also sets-up the proper distribution of the remittance payment accordingly.

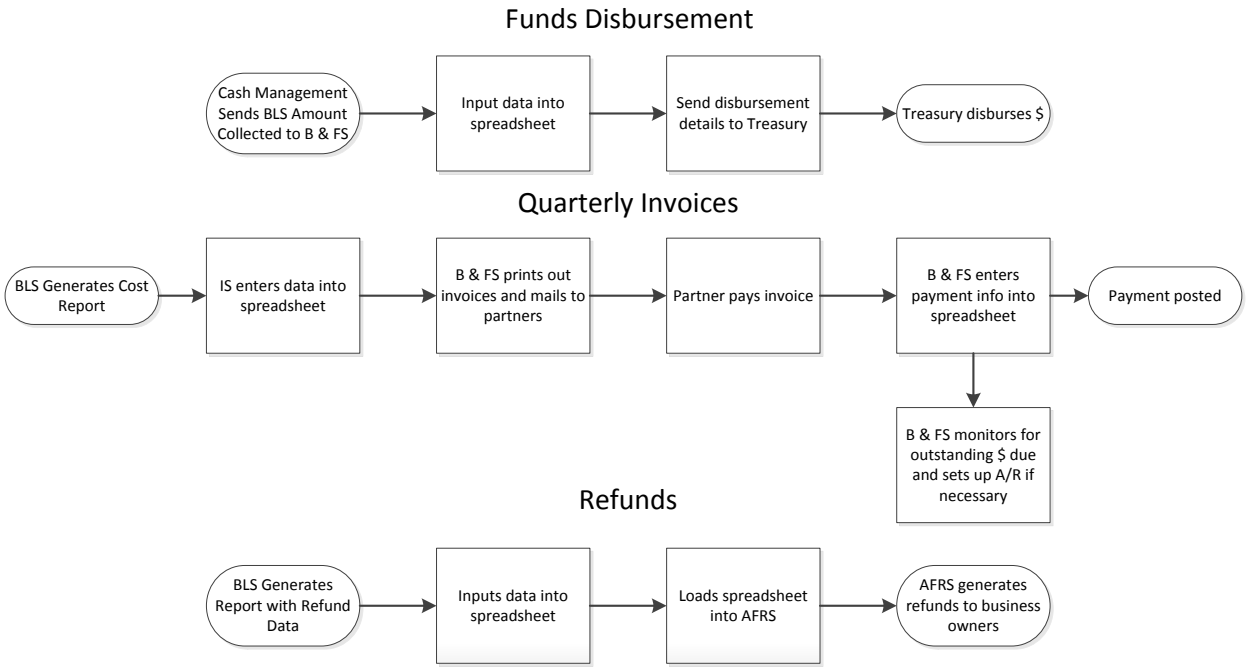
The renewed license is set to be generated and mailed at the next scheduled printing date. Printing the license may be delayed if other license endorsement(s) require additional processing. Liquor licenses are held until close to the expiration date to allow cities the opportunity to apply for restrictions from the Liquor Control Board. Endorsements that require valid corporate entities have the license held until the legal entity is renewed. Licenses with “child” endorsements are held until the “parent” is renewed.

If the business owner does not submit a renewal, the BLS system generates a delinquent renewal approximately one to two weeks after the expiration date. Note: If a renewal filing is submitted before a delinquency notice is generated, even if the filing produces an RFP or RFI, the delinquency notice is not generated even though the account has not been completely renewed by the expiration date. The delinquent renewal is identical to the original renewal notice with the addition of verbiage specific to the renewal being late, and the addition of the BLS program's late renewal penalty fee amount. No further notice to the licensee is normally sent even if the licensee fails to respond to the delinquent renewal. A "delinquent list" is provided to partners to alert them of their licensees that have not yet renewed. Some partners actively enforce the renewal of the license. Some partners have agreed to an automated BLS process whereby the license they regulate is automatically terminated on the licensee's account if not renewed by a specified time (usually a minimum of 120 days after expiration). In the case of corporation/LLC renewals, failing to complete the annual renewal will actually result in the legal dissolution or revocation of the legal entity, and will impact the business location records held by that legal entity. The BLS system provides reporting to the regulatory partners about the disposition of their respective licensee accounts, based on the final outcomes and pre-determined business rules programmed into the system.

5.4.2 Online Renewal

Most online renewals are completely processed by the system with no staff intervention. Corporation and LLC entity license renewals are normally completed in the online system and the filing and payment records are passed into the BLS automated system without further intervention by BLS operators required. When a change to the registered office address is made during the legal entity online renewal, review by a BLS operator is required. Online renewals of business locations are also normally completed in the online system. The online business location renewals that contain any of the pre-programmed exceptions requiring review are sent to a work queue for completion. For address changes, the system assists the user in selecting which address to make part of the permanent record. The system will present the address as submitted by the business owner, the old address from the database and the Finalist (address validation software) recommendation of the new address. Staff determines the proper address format and selects the appropriate address. They are also given the option to enter a different address. For Secretary of State renewals, staff is presented a list of the registered agents in the batch. They process through the list and denote if the agent is a business or an individual. This is done so the system knows how to display the name of the registered agent. Once they've processed the online renewals, they designate to which partners the information is sent, as well as the proper distribution of the fees collected.

5.5 Cash Management & Revenue Accounting



There are four different forms of BLS payment: cash and checks collected at the front counter, checks sent with paper filings to DOR through the mail, checks sent to US Bank Lockbox with the paper renewals, electronic filing payments (either credit/debit card or e-check) and payments received by partner agencies and JVed directly to the BLS Suspense account with a corresponding data file with remittance detail.

5.5.1 Paper Payment

Cash Management receives all direct mail and other documents with checks. Included may be checks that were received at DOR through the mail and front counter, at a partner's office, or at a DOR field office. DOR field offices will log in the receipt of the check, which is verified by Cash Management when they receive the documents and checks. Cash management also receives the "rejected" payment submissions from US Bank Lockbox and processes those payments.

Cash Management can also receive documents without payments, in which case they remove the documents from the envelope; date stamp the envelope, and staple the envelope to the document (application, renewal, RFI/RFP, addendum, etc.). The document and envelope eventually go to imaging, at which point someone needs to un-staple the documents for imaging.

BLS checks are logged into the Revenue Receipting System (RRS). If the amount on the check is different than what is indicated on the accompanying document, they annotate the accompanying document to match the check amount accordingly.

Paper payments received that do not have a UBI are logged in using the business name. The money is banked and imaged along with any payment document. If there is no document accompanying the payment, Cash Management attempts to identify the purpose of the payment, and often calls the BLS production area to help research it. If it appears that the maker of the check does not have any payment due, BLS instructs Cash Management to simply return the check to the maker. If the purpose of the payment can be determined, Cash Management creates a document for it by making a photocopy of the

check and return address on the envelope. The images of the validated copies of checks are then routed to the Miscellaneous Money queue for BLS staff to process. Exceptions to the process are filings collected by UBI field offices of Labor & Industries and the Secretary of State's office. Those two agencies deposit any checks they collect and create an electronic validation of the payment that is sent to DOR/BLS for processing. The original documents do not have the checks with them when received at DOR. These two agencies also handle NSFs from the checks they deposited and will relay information to BLS about such items so BLS can make adjustments to the respective filings as may be appropriate.

The documents are batched into groups of 35 – 70 items. An adding machine tape is created for the amounts of the checks and another is created with the amounts from the documents.

Once these balance, the batch is entered into the Batch Control System (BCS). The total dollar amount and the number of documents in the batch are entered into the batch header information. The batch identification is created consisting of a batch number and batch date. Staff then enters each check's amount. The validation number is printed on the check. The payment document is also stamped with the validation number. Staff must specify where the machine will print the validation number on the document due to the availability of space on the document. If there are situations of one check for multiple documents or multiple checks for one document, they must enter this information into the system distinctively to ensure the correct validation number series is entered.

When all the items have been entered, the system presents to staff the total number of documents, dollars entered, and if it balances to the amounts entered during batch creation. If they do not balance, staff reviews the entries to determine the error until they balance.

Once the batch is in balance, they print two copies of the batch sheet. One goes with the checks to be added to the daily deposit and the other goes with the payment documents.

When they create the deposit, they add up all the batches of checks with an adding machine. The total is compared to the BLS batch total in the BCS. Once these balance, they create the deposit slip and then bank the checks. From banking the checks, BLS suspense fund 03N is credited via the Cash Receipts Reporting System (CRRS). The CRRS sends an A8 (standard form to recognize deposits) to the Office of the State Treasurer (OST).

The details (validation-id and dollar amount) are placed in a file that is picked up nightly by the mainframe and loaded into the remittance file for processing.

5.5.2 US Bank Lockbox

US bank receives business license renewal forms with the NCR scannable coupon with/without a check payment. The mail received without a check is forwarded to Cash Management. Cash Management date stamps the document and routes to BLS.

When US Bank receives money mail, they remove the coupon from the renewal. They scan the check and coupon. The amount on the check is verified to the coupon total. The renewal documentation the coupon was removed from is sent to Cash Management. Cash Management sends the documents to BLS.

There are exception processes to US Bank Lockbox operations. When the check does not match the scanned coupon, US Bank sends a copy of the scanned coupon and check to Cash Management. Cash Management will scan the copied coupon and email it to BLS staff for resolution. The check is then included in Cash Management's daily deposit and banked.

Other exceptions, such as one check for a large number of applications, or multiple checks for one application are received and do not balance. US Bank sends the check(s) and document(s) to Cash Management for processing. Cash Management scans the coupon information to BLS staff for resolution.

To recognize the revenue, US Bank transfers the money electronically to DOR's concentration account. Cash Management recognizes the deposit by sending an A8 to OST through the CRRS system.

The rejected payments from US Bank Lockbox require numerous manual steps between both Cash Management and BLS staff to resolve and ensure that the payment and corresponding filing document are processed correctly. The original document related to a rejected payment is sent through scanning along with all other documents received from US Bank Lockbox. However, the rejected payment must have a special notation made in the BLS system to alert the operator that will process the document about the payment condition, and also be specially handled through Cash Management for deposit.

Cash Management also receives notices of returned checks from banks. The returned checks are logged and tracked through the NSF System. After the returned checks are logged, they are referred to BLS staff for handling. BLS acknowledges the receipt of the returned checks by clearing the transaction in the NSF System. To account for the loss of funds due to the returned check, Cash Management initiates a correction JV or A8 to reduce fund 03N.

5.5.3 Electronic Payments

Credit Cards – Staff accesses the online Electronic Payment Management System (EPMS) to view the daily transactions. They compare the credit card transaction amounts with the amounts deposited into the Treasury. They monitor this until OST informs DOR credit card activity is completed. They may need to make adjustments if a document was processed one day but the money was processed on another day and vice versa. To recognize Credit Card deposits, Cash Management sends an A8 to OST through the CRRS system to credit BLS suspense account 03N.

Credit Card payments are "authorized" through the online systems, but the billing of the credit card account is not done until after the filing has completed the automated processing in the BLS system and the actual amount to be charged is determined. BLS cannot bill the account for more than was originally authorized, but there are many conditions which can result in a lower amount needing to be billed than was originally authorized. If less than authorized is charged, the BLS system generates a letter to the business to relate that information since the "receipt" that was produced for the filer during the online filing transaction will indicate the higher amount. A payment "validation" is created that is used by the BLS system the same way that the check validation IDs are used. When the billing amount is determined, the account is billed.

Claims from credit card owners indicating that a charge to their account is fraudulent are occasionally received by Cash Management in paper form from the credit card provider (a "charge-back"). Cash Management sends the document to be imaged and then routes it to BLS Supervisors to research and prepare a response. The response generally is to argue the charge is valid, which is almost always the case. Cash Management faxes the reply to the credit card company or Merchant Services agency. They monitor the status of the claim online. If BLS loses the counter-claim, which is usually the case, Cash Management sends the information to BLS to back the payment out of the account. Cash Management recognizes the loss by a reduction of BLS funds on an A8 sent to OST through the CRRS automated BLS system. Account 03N is then reduced.

E-checks – Information Services creates a debit file daily. The debit file is sent to OST. OST validates the debit file and passes the file to Bank of America. Bank of America again validates the file on their end. The next banking day, Bank of America goes into the designated bank accounts and debits the payers account. To recognize the e-check deposit, Cash Management sends an A8 to OST through the CRRS system.

E-checks also present another source of returned payments. Some of the apparent returned payments are because of a typo the filer made online identifying their bank account so that when the debit file is presented for payment, the bank cannot identify the proper account and rejects the RFP. Otherwise, since

this is a check debit from a bank account, it is possible that the bank account simply did not have sufficient funds (NSF) at the time the RFP was presented. E-check NSFs are handled similarly to regular check NSFs. Cash Management verifies the return total OST received versus what was uploaded into EPMS. Once calculated, a negative A8 is sent to OST through the CRRS to reduce fund 03N.

When Internet payments are received, the mainframe releases the money to State partners in an electronic JV, which is then processed by B&FS. The same JV file disburses money from finalized payments received from Cash Management, US Bank, Labor and Industries and Secretary of State.

5.5.4 Distributing Money

When Cash Management deposits BLS payments, all the funds are deposited into the suspense revenue source codes within the Master License Account (Fund 03N). Revenue Accounting receives a daily detailed report, via email, with the totals for the different licenses after the money is processed by the BLS system. They copy the information into a spreadsheet. They convert the data from the process account codes still used in the BLS system to the revenue source account codes they use for financial reporting. They create JVs to allocate the funds deposited into the suspense account into the appropriate revenue source codes and different partner state agencies. JVs for funds that stay within the agency are prepared and processed in the Agency Financial Reporting System (AFRS) daily. The frequency for other state agencies varies from daily to monthly, depending on the partner.

The license fees collected for city partners are distributed by Revenue Accounting. About twice a week, they receive email with a list of city partners and the amounts to be distributed. This data is also sent in text file format to Revenue Accounting via SFT. Revenue Accounting retrieves the text file, and verifies that the data matches the email. They then upload a file to OST via SFT for them to disburse the money to the city partners. Revenue Accounting processes a JV to record the distribution of funds in AFRS.

To reconcile, they receive a monthly BLS report of the total dollar amounts collected for each license or partner. They reconcile this figure to the total they have distributed.

Invoices

Quarterly, BLS creates invoices to state and city partners. The invoices include the costs of processing credit card payments and mainframe system usage for city partners, where the logons are defined as DOR accounts. State partners maintain their own logons and pay their own system costs directly to CTS. The data starts from printouts from the BLS system. BLS production staff enters the figures from the printouts into a spreadsheet, which populates the individual invoices and creates a tracking sheet for Revenue Accounting. BLS staff sends an email to Revenue Accounting to inform them when they are finished entering the data.

Revenue Accounting prints out the invoices from the spreadsheet and mails them to the partners, and sets up accounts receivables in AFRS. State agencies can pay either by Interagency Payment (IAP) or checks. City partners can send in checks for payments. When check payments are received by Cash Management, they create an A8 in CRRS to be sent to OST and AFRS. IAP payments are processed by Revenue Accounting as JVs. These transactions record cash received and liquidates the accounts receivables set up for the partners. Revenue Accounting posts the payments in the tracking spreadsheet to monitor receivable balances.

5.5.5 Refunds

The BLS system handles the creation of refund records as part of the revenue handling process. As the refund records are created, they are reported in a daily paper report that is sent to BLS administration for review and approval for payment. To generate refund checks, Revenue Accounting receives the approved report from BLS and then rekeys this information into a spreadsheet. The spreadsheet is in the format

needed for entry into the AFRS. They proofread the information keyed, and when correct they upload the spreadsheet data into AFRS, which generates the checks. It takes 8-10 weeks for the refund check to reach the business owner.

6 Partner Assessment

6.1 Stakeholder Survey

Forty-three stakeholders responded to the Stakeholder Survey, providing input to the current state assessment along three categories: 1) User Experience, 2) Process, and 3) Data/Financials. The results recorded in each of these categories describe an aging system that is not user friendly but one that has saved time and money and is supported by a knowledgeable and reliable staff at DOR. Appendix A contains the detailed responses to each question, and below is summary analysis of each category.

User Experience – Of the forty-six respondents, 70% use the system fewer than 10 times per week. Users do not like the "green screen" GUI of the system, and they find it very time consuming to access due to multiple steps to sign on and navigate through the system. A comment typical of respondents: "Must log into the system three separate times, using different IDs and passwords. After login, have to remember the commands to enter (no list of commands is shown) or find a 'cheat sheet'. Errors often occur and the system hangs up with no feedback about the problem." Often, users turn to the web-based lookup option to research business owners rather than spending the time to navigate the BLS system itself.

Process – Nearly 75% of respondents indicated that the overall process for managing licenses is clear, consistent, and productive. Further responses however, point to a knowledgeable BLS staff and not the system as the reason for this high rating. Partners detailed business complaints about having to reenter application data when simply adding a license type or location, and some stated that license requirements can be confusing to businesses, especially those with English as a second language. While the application process can be confusing, over 80% of respondents agreed that the renewal process is clear, easy to follow, and responsive. Comments typical of respondents: "We have found DOR's customer service to be top-notch and their staff to be very responsive to our inquiries and when issues arise." "Businesses don't understand why they must complete the full BLA to add an endorsement if they already have an application on file; why can't they just complete a supplemental application form with pertinent information?"

Data/Financials – Partners responded most favorably to these questions (average of 84% agrees across all questions) than others indicating that the information contained within BLS and the interaction between the partners and BLS is reliable and strong. The most common suggestions for improvement were to automate reports and/or make them more easily accessible. For example, "We wish all reports were available in Word AND Excel (or a text format importable into Excel). Also find that the SFT site is not as efficient as the email system was for reports, as I now have to save the files, then retrieve to send on to our staff. Minor issue however."

6.2 Partner Workshop

The partner workshop provided the RSI team with a deep insight into how state agencies and municipalities use the system differently. Each workshop was structured around how the partners used the system, how they exchanged data with BLS, and how they supported the regulatory process of enforcing licenses.

6.2.1 System Use

Nearly all partners use the BLS System on a daily basis to review license applications for approval or to research existing businesses. Many partners maintain a separate system external to BLS through which most of their regulatory mission is accomplished, but which relies on BLS to supply the account

information utilized in the other systems. Major examples of this relationship are Labor and Industries' LIINUS system, the Employment Security Department (ESD), Department of Health (DOH), and Secretary of State (SOS). The SOS uses it to create and capture the UBI of the entities it records and regulates, although the BLS database is the primary resource for the ongoing renewal of the for-profit corporation and LLC entity licenses regulated by SOS. All of the municipalities, the Department of Licensing programs and many of the Agricultural programs also use the BLS System to review, approve, and regulate their licensees administered through BLS. Several of the local governments, especially those collecting a local B&O tax, will maintain an internal system at their city which is supported by data supplied by BLS.

One significant issue that all partners identified was the problem that businesses have in adding a license type or location to their existing record; currently they must reenter all basic license application information, not just the addendum, and this can take considerable time if the business is adding multiple locations or license types.

6.2.2 Data Exchange

The workshops exposed a variety of methods used for exchanging data between BLS and partners.

1. Reports and Agency Requirements Documents (ARDs) – Some agencies receive paper ARDs via interagency mail. They then key the data into their resident systems for the regulatory review and access BLS for final approval. Standard reports provide the partner with the information necessary to support their regulatory control, determine eligibility, and to know when to follow-up on incomplete applications and renewals. Partners also have Optional files available, providing them with additional information regarding terminations, new licensees, and active licensee files.
2. Secure File Transfer – DOR offers a secure file transfer site from which partners extract various reports and ARDs. Partners logon to the site and download WORD, TXT or CSV files. Some then print the reports, such as ARDs, for distribution throughout their agency, some print the reports to help manage work flow, and others upload the files directly into their resident case management systems.
3. Direct Interface – These are used by a few state agencies. The Liquor Control Board (LCB) has a two-way interface that downloads new applications from BLS to the LCB system and then uploads the final endorsements when approved. LCB also receives and keeps paper ARDs because they do not entirely trust the electronic exchange. ESD uses a one-way interface to receive ARDs, but does not upload licensee changes to BLS; this results in license and demographic changes from ESD most often not getting updated in BLS.

6.2.3 Regulatory Process

As businesses apply for state and local licenses, partners are required to approve endorsements thus enabling BLS to issue the business license. All municipal partners handle the regulatory review outside of BLS, some using case management systems and others manually routing applications for approval. Some state agencies review applications independently, some agencies and a few municipalities allow auto-approval (no regulatory review required), and others use the BLS system to support their reviews. For instance, Limousine license applications leverage the BLS imaging and data store functionality to support the approval process; users review data, make requests for information, and approve licenses all within BLS system.

6.2.4 BLS Scope

As is evident from the various BLS functions and roles described above, the Partner Workshops identified a conflicted scope for BLS. Over the years that BLS was resident at the Department of Licensing, it is apparent that new license application processes looking for a "home" were added to the BLS System. This expanded the scope from a central repository and transaction support system to one that is used to manage business requirements for a particular license type. Furthermore, the BLS System has adapted to multiple roles for data exchange and system use, resulting in a complexity that has proven hard to maintain; it has tried to be "everything to everyone." It has served this purpose fairly well, but as the BLS System Replacement Study examines alternative solutions, the scope will need to be clarified.

7 Technical Architecture

The BLS technical architecture has a combination of systems, platforms, technologies, and custom applications. However, the major findings from the BLS technical architecture assessment are typical findings when assessing custom development efforts:

- the applications are limited in capabilities and have not kept pace with capability demand;
- the need, gap, cost, and effort for new capabilities is growing; and
- the skills and knowledge of the existing solution are now diminishing.

This section of the assessment covers the major issues, deficiencies, and challenges for system replacement, followed by an overview of the systems reviewed.

7.1 BLS System Issue Overview

While various difficulties exist for the current BLS system, this section seeks to identify and explain key issues that were discovered during the technical assessment of the BLS system. These issues are all in light of the fact that capabilities need to be added to the BLS system to meet near and long term program needs.

7.1.1 System Integration and Interfaces

Because of increasing requirements for functional and system interactions with businesses, and cities and state partners, BLS is challenged to support the integration needs with existing systems and resources. Current BLS technology and resources are, furthermore, preventing DOR from providing new functional and system capabilities. These capabilities include, but are not limited to: 1) improved identity and access management (IDAM) techniques, 2) information integration and accessibility, 3) standards for system to system interface, and 4) relational database capabilities.

Custom development of these and similar new capabilities on existing platforms with the limitations inherent to the technology will be quite costly and time prohibitive.

Having interfaces between systems (that are based on different hardware and software) increases development, testing and maintenance expenses as each new feature and integration is developed. For example, consider a shared service that provides routing, review and approval of all business license applications for all partners. This would be difficult to deploy since business license applications are in the legacy mainframe system and ADABAS files, while rules are in various technologies or even in desktop procedures. Web applications work well with relational databases, which are not readily available. DOR would have to continue to build front-end applications and develop web-hosting support to leverage their legacy mainframe data.

7.1.2 System Costs

The cost to maintain the existing BLS system hardware and software coupled with the additional expense of new technologies creates an IT expense that is too high to justify. Said simply “variance costs”, especially when that variance spans age of system, technology standards, and geographical and organizational boundaries. On one hand, the resources required to maintain the IBM Mainframe, batch processes, data integrity while adding additional web-hosting support, identity and access management, and all of the needed interfaces/integration points is a substantial increase in BLS system costs. On the other side, the cost to develop all of the required capabilities in the near term is also excessive. To gain the necessary functionality, optimize the benefit from strategic investment, and maintain or even reduce the ongoing maintenance cost is made difficult by the existing technical architecture.

7.1.3 System and Information Conversion

System conversion from the existing BLS platform to an enhanced platform must be completed without decreasing existing levels of business license services. To increase the complexity of this issue, other BLS related systems are also in flux, including: Tax systems (including but not limited to BRMS), and partner systems. While conversion is taking place, the BLS systems will continue to experience increased maintenance and requests for enhancement. Changes in the existing solution will only complicate the role out of new capabilities.

Information conversion is also a primary concern. Creating an efficient, normalized, and relational database from the existing ADABAS is not a trivial effort. Data clean up, conversion and migration requires significant effort. This is the biggest inhibitor to the DOR's *effectiveness* (as in business license (BL) application management), *efficiency* (as in BL application processing, especially when partners are involved), and *agility* (to support regulation changes, license additions, and rate changes). This makes conversion a very long and expensive undertaking since the existing systems must continue running while the new system is being developed. However, data improvement (quality and availability) is vital to the BLS solutions going forward.

7.1.4 Personnel

The types of conversions mentioned in 7.1.3 (System and Information Conversion), produce a significant increase to resource demand. Several scenarios come into play:

- Existing levels of support staff must be maintained to keep BLS systems working.
- At the same time, the staff most equipped to maintain the BLS system, will be the ones most needed during the conversion.
- New or enhanced skills will be required for the development of new standards, which may mean training for existing staff or additional staff that have the appropriate skills.
- Any loss of existing talent becomes a risk to the effort.
- Newer or additional staff may not have mainframe, COBOL and ADABAS experience required to either maintain the existing system or participate in the conversion.

7.1.5 System Replacement

The existing BLS system is fairly expensive to maintain, difficult to enhance, and cannot meet the Agency's requirements given existing budgets and skill sets. Service Oriented solutions (Custom, COTS, or developed in-house) are much more extensible, flexible, and configurable if well designed. This may be required for satisfying the business needs, relating to partner interfaces, performance reporting, reducing the time to produce new business license applications, and other necessary capabilities. Replacing the BLS IBM system with proven solutions may be required to overcome current limitations and has other benefits.

7.2 BLS System Deficiencies

The BLS is supported by a set of applications and technology that do not have flexible, modular components and services. As such, these applications are not configurable to support all aspects of a state centralized license solution:

- diverse cashiering methods (walk-in, paper/mail applications, e-filing);
- a full-service customer support center (with seamless integration with partners, one-stop customer support, comprehensive access to support license maintenance, and complete rules and guidance);
- streamlined processing;
- information verification across tax, and partner databases (via a centralized or federated

information architecture);
- license progress tracking on-line (including partner status, online approval, verification and digital distribution, online amendments, and automatic transfer for renewals).

The following list identifies specific functional deficiencies of the current BLS system and associated processes:

1. ***Limited interface capabilities:*** Limited support for interfacing with modern web applications and partners' applications (using APIs, XML, JSON, etc.).
2. ***Inconsistent interface methods:*** Manual, digital -- update in email, online, on paper. Standards need to be established and Web applications created for cities and partners that do not have their own solutions.
3. ***No BLS processing user interface for Partners:*** partners do not have a BLS provided interface for business license processing/approval.
4. ***Applications not flexible/configurable:*** Hard to change. All changes require a process of development, testing, and deployment rather than simple configuration approach. Changes must be done by IT staff rather than configured by business staff.
5. ***Auditable:*** The necessary business intelligence is not captured to determine license processing statistics like time in queue, time at partner, changes made by partner, etc.
6. ***Accuracy:*** The existing information architecture does not track, manage, or maintain history for all changes made to BLS data. The changes to BLS data by various partners as well as business related changes are not all captured in the BLS system.
7. ***Offlining:*** License information that is inactive is still in the information set, limiting performance (i.e., no rules exist for purge/offlining of data).
8. ***Traceability:*** Application progress cannot be queried and tracked (e.g., the package delivery tracking systems).
9. ***Information:*** Owners, Stewards and Users are not clearly defined for all BLS data.
10. ***Data Quality Standards:*** Standards are non-existent or minimal. Establishing clear definitions for the level of quality required for the data used in processing, license determination, and license maintenance across all partners and DOR is vital to improving the overall process.
11. ***Identity and access management technologies:*** Non-existent or minimal at present. IDAM technologies provide a way to effectively and efficiently add functionality to secure data, while also making it available to clients and partners throughout the lifecycle of the business (from BLA to closure).

The current BLS system is also missing the following key structural components:

1. ***No Master Data for BLS information:*** There is no master data established for Fee Structure, Organization (business, agency), Location (mailing, phone, etc.), or other key areas of BLS.
2. ***BLS information is not normalized or optimized:*** This results in very inefficient ways to access, manage, process and report on license application data.
3. ***No BLS Semantic Model:*** System, application, and information semantics are very inconsistent (no precise and common definitions – term usage varies with system/application/process).
4. ***No standard way to implement new legislation/regulations:*** Current methods include:
    a. Code changes
    b. Stored procedures
    c. Data records

7.3 BLS systems and business challenges

This section describes the systems, sub-systems, technology, and information components of the BLS licensing system in relationship to business challenges discussed in earlier sections. For the most part,

each individual sub-system has been a stable component. However, BLS requires far more flexibility, modularity, and extensibility for the future. In addition, much of the standard functionality for call centers, transaction tracking, relational database, and web standards is not present in the existing solutions. The lack of modern technologies and integration difficulties pose substantial limitations to improving the Washington business licensing activities. Many of the business challenges listed in the earlier sections of this document directly relate to technology, information and system issues.

Business Challenges	**Associated Technical Issues**
Counter staff print out a receipt and then stamp it with "Received". This is redundant.	Existing business license and cashiering systems are not integrated so that counter staff can process the transaction online. Additional development time and effort would be costly to add the needed interfaces and controls. It would also add maintenance cost and complexity due to the lack of agility.
The websites are not easily navigable for business, and wording is not consistent from page to page. Business owners often cannot find the business application because they go to DOL's website. Business owners sometimes do not understand the wording on the website regarding "IE 6.0".	BLS applications are not driven from a single style guide and semantic model that can produce consistency and clarity across applications.
Staff cannot take changes over the phone because a signature is required.	BLS systems were not set up as complete customer service applications with multifactor authentication and business rules built in to ensure authentication of caller and audit log for call center transactions.
There is no current process to capture the types of questions and/or standard responses.	BLS web presence does not have a digital capture of FAQs, online recommendations, or other ways to assess user satisfaction. This would be a complete custom application effort in the current technical environment, thus adding to the cost and complexity of maintenance.
Staff must ask the caller for the UBI number at the beginning of each call.	Call center system (IVR) is not integrated with the BLS solution to control initial views of business making the call.
To fax license and renewal documents to a caller, staff must "select all", copy, and paste to Adobe for the fax write functionality. This is available only for one-page renewals. To fax a license or renewal with multiple pages, staff must print the license or renewal and manually fax it.	BLS solutions do not have modern content management technologies that allow for the indexing and storage of digital content, sharing or transmitting of documents in various formats needed to support a diverse business environment.

Business Challenges	Associated Technical Issues
Limousine and For Hire (Taxis) cannot do applications or renewals online. In the past, staff were able to issue the decal and certificate the same day the applicants applied. Now the process has lengthened substantially, due to a waiting period of up to 2 – 3 weeks for DOL to approve, before the approved decal and certificate are back in the hands of the business owner. This is because the application must first be imaged (2-3 days), then sent back to appropriate work queue to apply payment (1-2 days), then sent to DOL for regulatory approval (1-2 weeks depending on DOL workload and staffing).	The only technical solution for this is to put DOL business rules in the solution (only possible through application development at this time). If the application is walked in, BLS should be able to follow the old process; for mail the delay is simply the reality. However, the system could allow the business owner to print the license from their web "dashboard" or "my account" space.
Work flow and queues in BLS are only supported by the imaging system. As a result, all documents must be imaged to initiate work processes; this includes email and other electronic documents that must first be printed and then scanned. Note: The Internet transactions which require human review are also placed in work flow queues.	The current BLS solution does not have automated workflow management technology. All work flow is essentially manually managed, or programmatic in nature. Any new workflow outside the existing (imaging) technologies would require development of complicated web applications that would have considerable cost, time and resource requirements, in addition to adding to cost, testing and complexity of maintenance.
Imaging of BLS documents is much more time consuming than for other DOR, tax-related documents. DOR has two distinct processes and systems for imaging, of which BLS is the most cumbersome.	BLS imaging solutions are based on slower, lower quality, and less efficient technologies in comparison to Core Tax imaging solutions. Migration from the existing imaging solution would create standardization of imaging, add performance and flexibility for the imaging process.
Faxes are sent to be imaged and then processed into the queues.	BLS imaging technology (content management) is not modular and does not provide the flexibility to allow for PDF image insert into queues.
There are many instances where the BLS staff is required to enter information that is accessible in tables or other sources. In the training area, this is challenging with the vast amount of data they must remember, and increases the chances for errors.	BLS information is not centralized, normalized or accessible. Modern techniques (data warehousing, Master Data, data marts) and technologies (data services, relational database, data security) are not supported in the current technical environment.
Online BLA asks the same question in different areas, such as phone numbers and contact.	To achieve better online application efficiency and effectiveness, BLS web applications need significant rework, standardization and consistency. However, very little improvement can be made in the functionality due to the lack of integration across BLS systems and sub-systems.
Some questions are included on the online BLA	BLS application processing should be

Business Challenges	Associated Technical Issues
to assist routing for L & I. It's not required for the application processing and is not maintained long-term within BLS.	accomplished by a flexible and configurable interactive application wizard that applies business rules based on the content of the BLA. Currently this would require costly and custom development as well as adding to the maintenance cost and complexity.
Agency partners cannot clear RFIs related only to them. These have to go through BLS, adding a step and more delays to the process. However, the ability to clear RFIs related only to them has been built into the subsystems for Dealer Services, Richland and Bellevue.	BLS systems and sub-systems are not configurable and don't have workflow automation or central data. Instead processes like RFI have to have custom-coded functionality inserted into specific sub-systems adding cost, maintenance and testing complexity.
Registration Unit staff have to remember city business rules regarding city partner requirements because these rules are not written in the system. For example, when to add a city, when not to, when to create an additional location, when not to and whether it is a temp business in the city that the applicant is requesting.	BLS system does not contain all business rules in either supporting documentation or in a centralized rules engine/repository. This makes supporting city, partner, and legislative changes difficult to add and support in the system.
Specialty License Unit staff have to remember hundreds of business rules regarding partner requirements because these rules are not written into the system.	BLS system does not contain all business rules in either supporting documentation or in a centralized rules engine/repository. This makes supporting city, partner, and legislative changes difficult to add and support in the system.

7.4 Business Licensing Service (BLS) Systems

The BLS licensing functionality is provided via an IBM-based application hosted at CTS with a suite of server based support applications now hosted at DOR. The CTS technology provides firewall support, secure channels, file transfer and IBM System 390 hosted application environment. The DOR technology includes additional network support/security, along with: imaging, internet applications, cashiering and information required to complete the licensing service.

The BLS IBM Mainframe sub-system is maintained on OS390, Natural and ADABAS. Partner organizations access the BLS information through terminal emulation, file transfer or reports provided by the sub-system. Several State partner organizations have update authorization on the BLS sub-system allowing direct access to the data on the mainframe. It should be noted that the technology is hosted by CTS and the hosting cost is passed on to DOR. The appropriate portions of the fees are collected from the partner organizations. Sub-system software enhancements and support are provided by the DOR. These costs are not passed on to the 14+ State partner organizations.

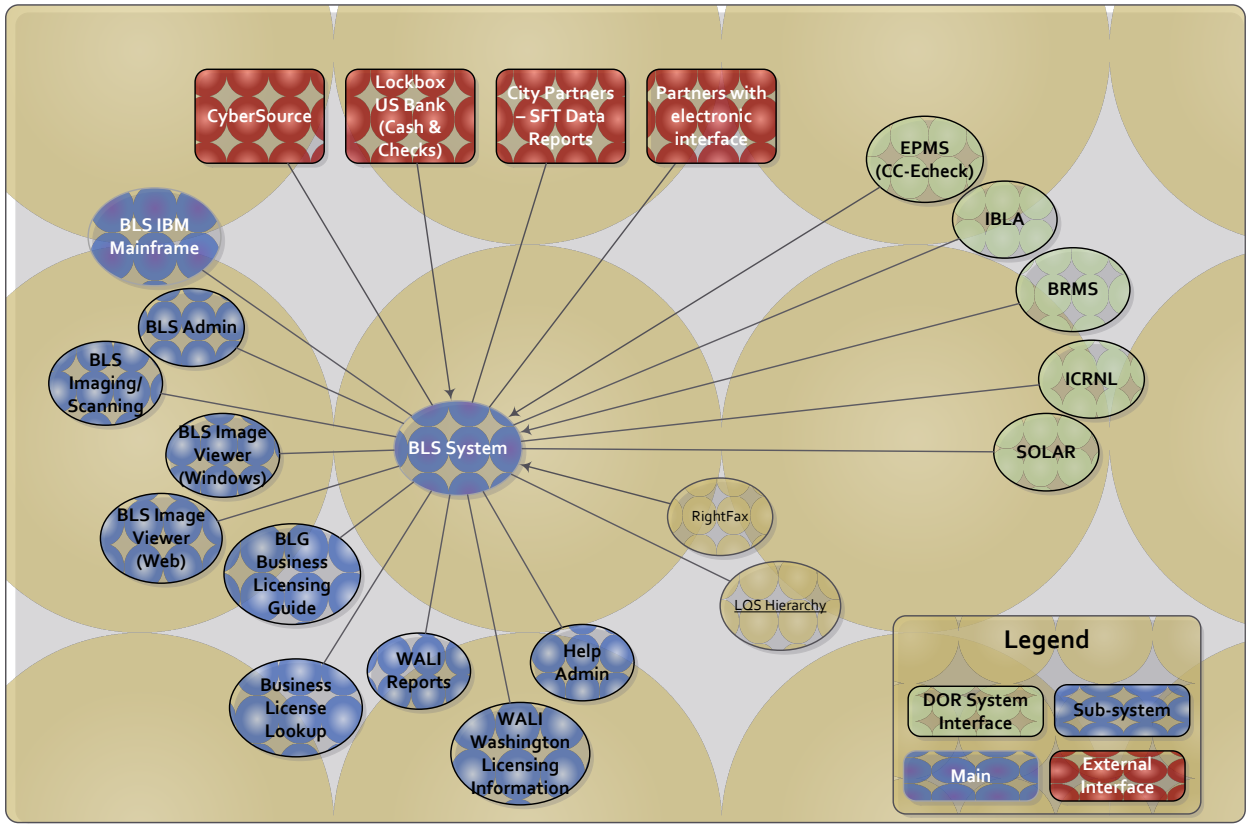


Figure 7.1 – BLS Sub-System

The BLS Sub-systems (shown in figure 7.1) are hosted at the WA Department of Revenue in a mature network environment as a suite of server based applications. These sub-systems sit on 2 physical servers and 10 virtual servers for processing, file transfer, and other applications. The BLS server environment utilizes minimal capacity and represents less than 2% of the physical server environment and under 7% of the virtual environment. BLS has minimal impact on network traffic and performance.

In general, the BLS Sub-systems are stable applications that are in maintenance mode. It was said that for the most part, "Efficiency is not the issue" rather the technology simply needs a refresh. BLS system change requests for business rules or batch process changes are recorded in a list stored in SharePoint. Rarely are these changes seeking performance improvements. However, this list has grown to 400+ items. These items are prioritized quarterly with the top few selected to represent the calendar quarter's priority work. These changes include legislative changes, new requirements to support partners' needs, issues, fixes, and new ideas. Most other BLS applications are also in a maintenance mode.

7.5 BLS Imaging - Document Imaging System for Business License

The primary function of the BLS imaging system is to convert paper (applications and renewals) to image. These images are categorized and linked to a queue for data entry. Business License information is captured from the images and keyed into a BLS IBM Mainframe session. This Subsystem features two (2) Kofax medium speed scanners (90 ppm) that process all paper application and renewals and supplemental documents. Images are stored in SAN with a 500 GB capacity. Current image storage is just below 50% utilization with 240 GB consumed. Once the image has been verified, the paper is destroyed and the image becomes the permanent record. Note: Images have never been purged or deleted.

The imaging system interfaces with BLS IBM mainframe system by providing information for linkage to imaged applications and renewals. The image solution presents and manages the user interface for image viewing (Windows/Web), image printing and visual information capture.

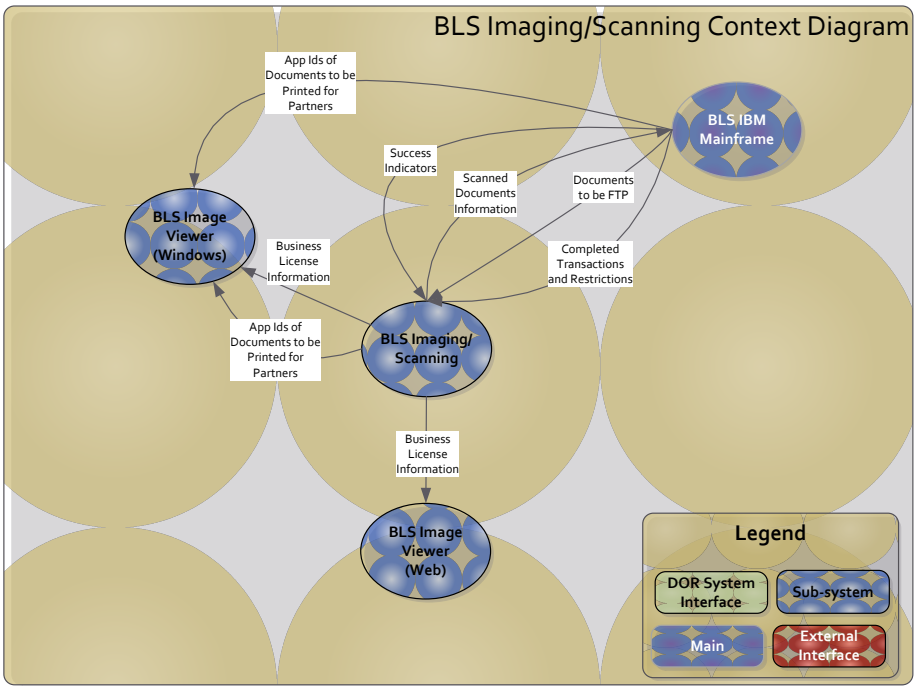


Figure 7.2 – BLS Imaging and Interfaces

7.6 BLS IBM Mainframe

BLS applications are custom applications developed for the business licensing program in Washington. The primary BLS application and the associated batch jobs are developed for and run on an IBM 390, hosted by CTS. This application was developed in and is maintained in Natural and ADABAS. BLS operators utilize the CA Associates Attachmate 3260 terminal emulator to interface with the BLS IBM mainframe system. The legacy application has embedded business rules and multiple jobs that are run as frequently as every 20 minutes up to weekly batch jobs and less frequent reports and exports. Some DOR/BLS licensing partners have systems that allow them to access the BLS IBM Mainframe applications through terminal emulation screens.

The primary purpose of this BLS Sub-system is to capture, maintain and respond with business license information for the State of Washington. The maintenance or update of the core data can be completed via operator and terminal emulation. In addition, the BLS IBM Mainframe applications also create Agency Required Documentation (ARD), address change notification, location information/updates, to the various partner systems, and a host of other varied and detailed outputs.

The system interfaces with various web and server-based applications using a messaging queue (IBM's WebSphere MQ).

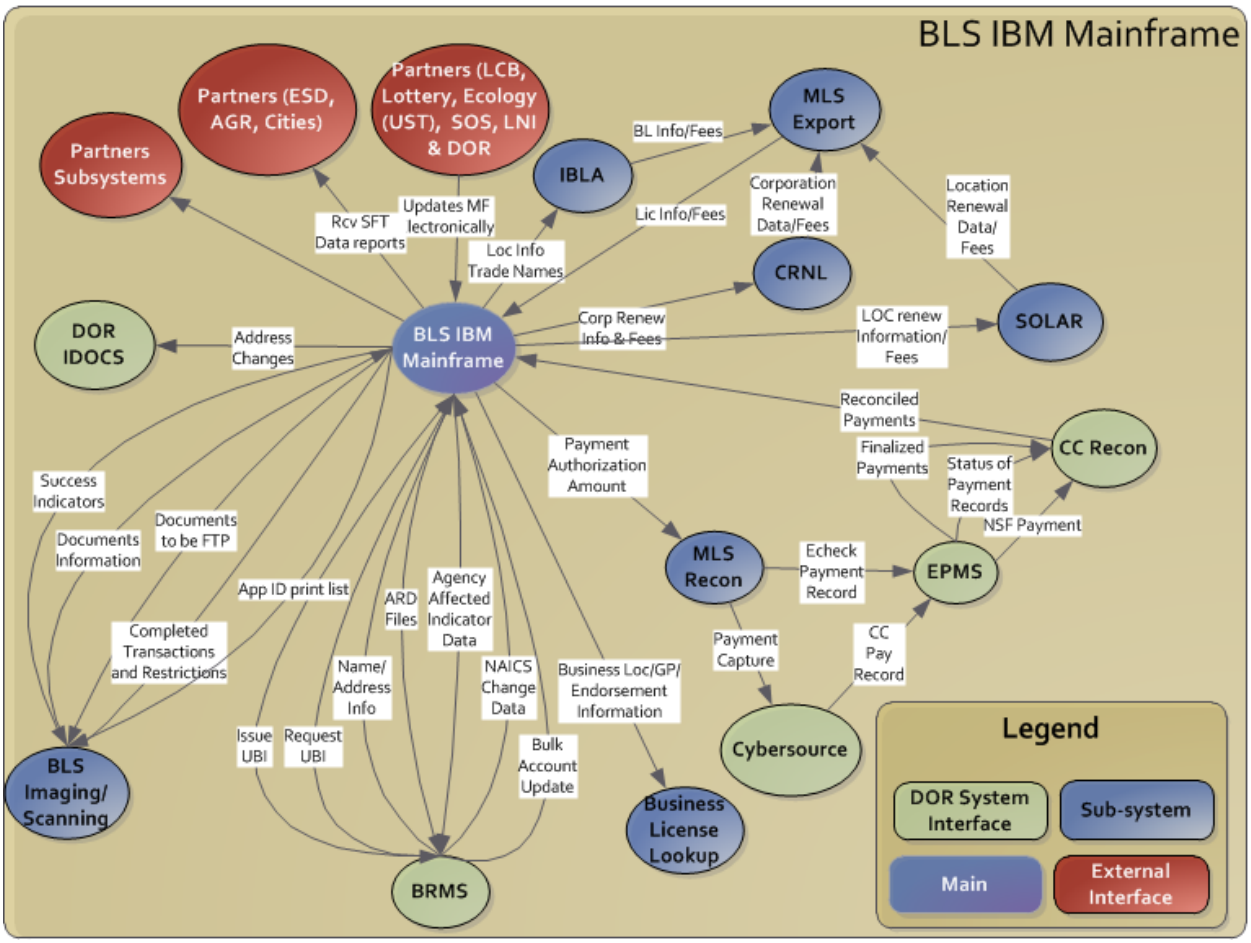


Figure 7.3 – BLS Mainframe and Interfaces

7.7 IBLA - Internet Business License Application

The IBLA allows businesses to apply for the application online. While it bypasses the imaging solution, this sub-system leverages many of the same subsystems as paper BLA to process payments and reconcile accounts. Additionally, business license information is made available on the BLS Imaging solutions by digitally reconstructing the business license data. Once the information is processed on the mainframe, it follows a standard payment path of MLS recon, Cybersource (if Credit Cards) and EPMS. (As shown in figure 7.4)

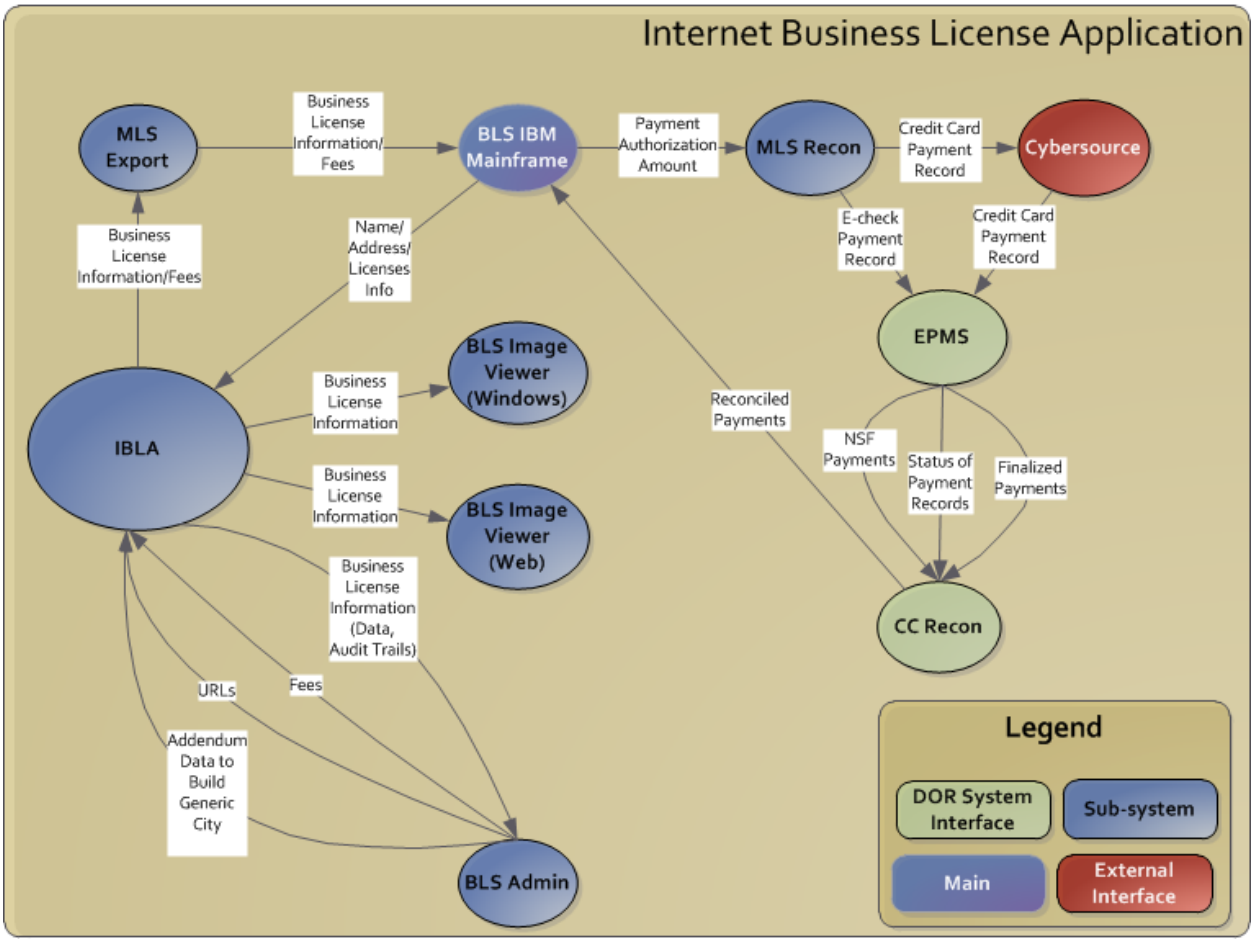


Figure 7.4 – Internet Business License Application

7.8 SOLAR - State Online Location Renewal

While similar to IBLA, SOLAR processes location renewals. Once the renewal information is complete, the location renewal information and fees follow the same path as IBLA (BLS MF, MLS Recon, Cybersource, and EPMS).

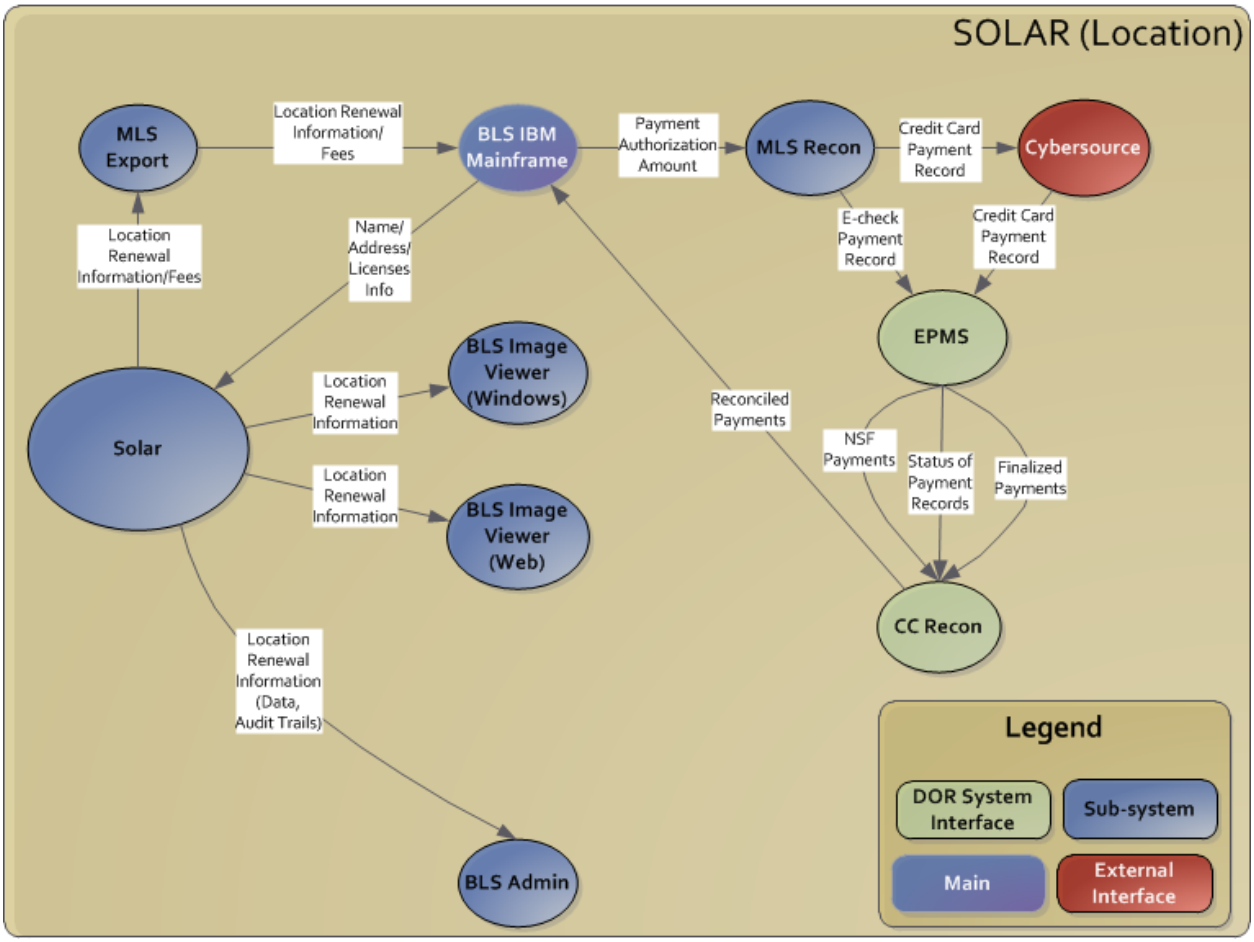


Figure 7.5 – State Online Location Renewal (SOLAR)

7.9 ICRNL - Internet Corporate Renewal Licensing

While similar to SOLAR, ICRNL processes corporation and LLC renewals. Once the renewal information is complete, the corporation renewal information and fees follow the same path as IBLA and SOLAR (BLS MF, MLS Recon, Cybersource, and EPMS).

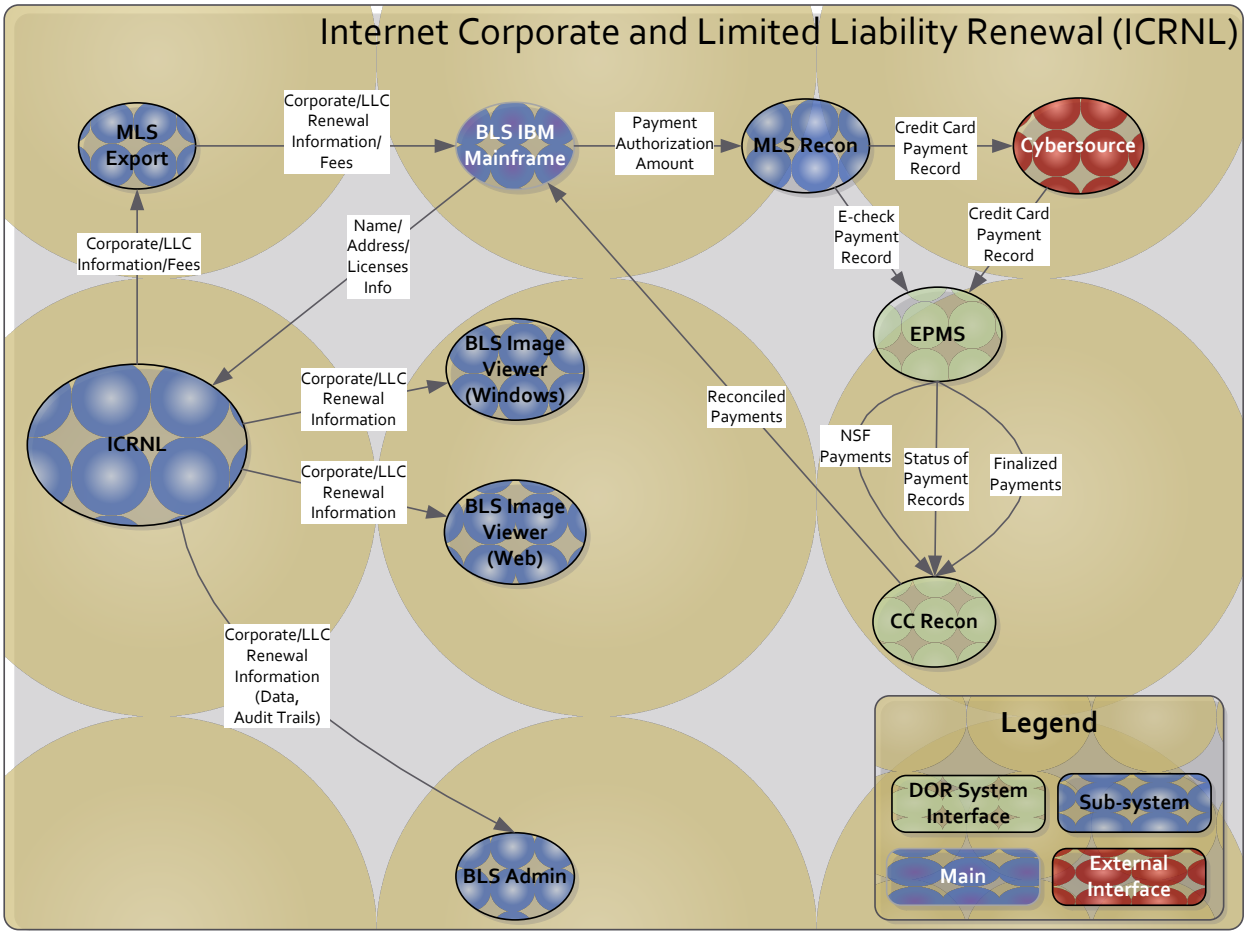


Figure 7.6 – Internet Corporate and Limited Liability Renewal (ICRNL)

7.10 Business License Lookup and LQS - License Query System

The Business License Lookup (LQS) is used to search data extracted from the BLS data for existing business licensee information. This online service is used by the public to lookup information on registered businesses. It is also used by partners to reduce the amount of time and expense in using the BLS system. The information associated with the business is restricted to BLS information. The system searches against a custom database file set extracted from the BLS IBM database on a daily basis.

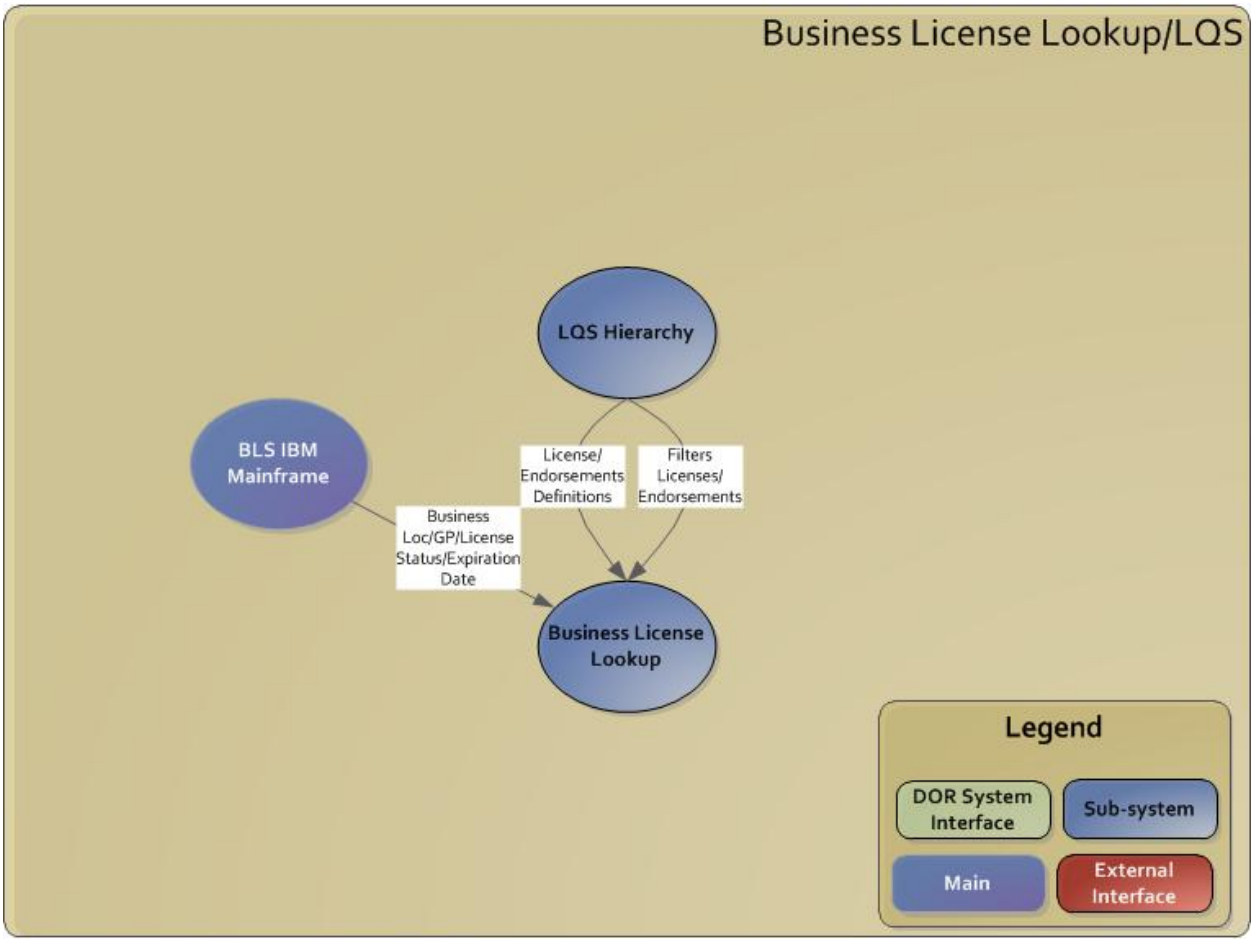


Figure 7.7 – Business License Lookup/LQS

7.11 WALI-BLG - Washington Licensing Information - Business Licensing Guide

WALI-BLG allows businesses to get licensing information and guidance. The information can be printed, emailed or faxed depending on the businesses preferences. WALI is a server-based application used internally by BLS operators, and BLG is the web-based version available to the public.

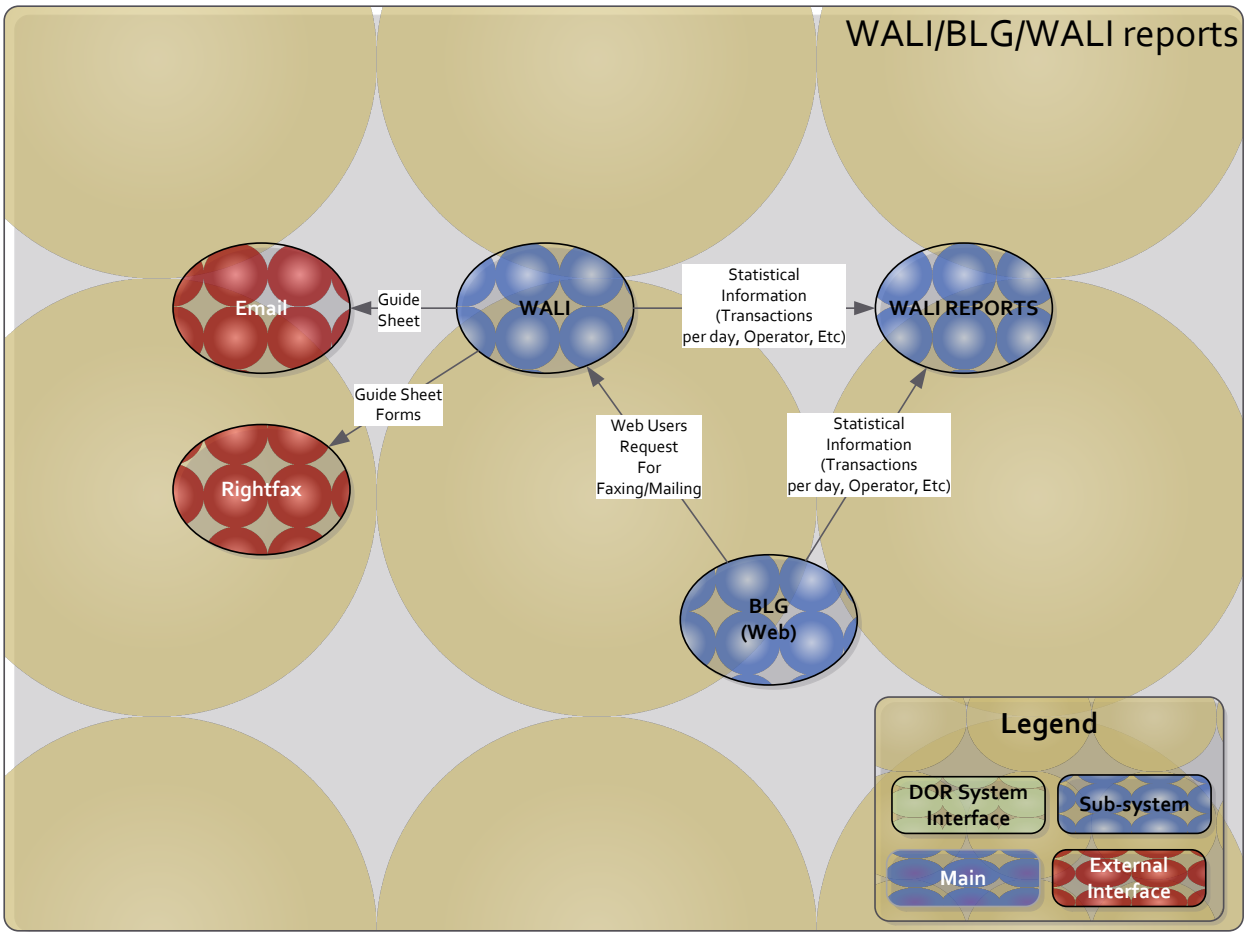


Figure 7.8 – WALI/BLG/WALI Reports

7.12 BLS Admin - Help Administration

The BLS Admin sub-system accesses online BLA, corporate renewal and location renewal information to create an audit trail for those transactions, and compile other reports related to them. BLS staff and some state agency partners view IBLA, SOLAR and ICRNL internet filings, and BLS staff can view audit trails, statistics, survey, and credit card search information for those online filings. BLS Admin also offers the capability to add generic city partners to IBLA and some minor online system table updates.

The Help admin service provides consistent help information across the three sub-systems displayed in figure 7.9.

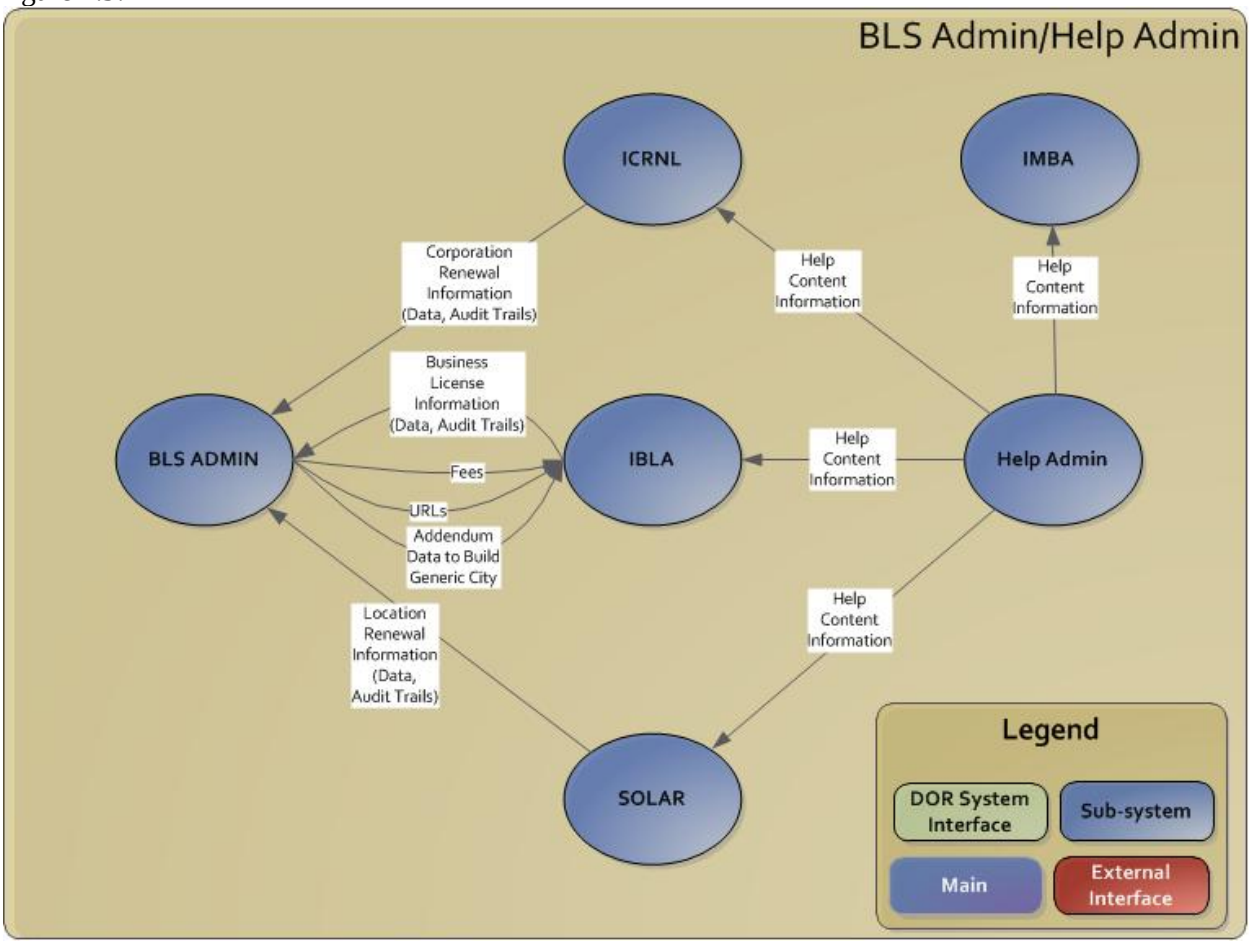


Figure 7.9 – BLS Admin /Help Admin

7.13 DOR and other Interfaces

7.13.1 EPMS - Electronic Payment Management System

The DOR Electronic Payment Management System supports the BLS solution by processing credit card, e-check, and e-check Debit Returns payments for both new license applications and renewals. The components of EPMS receive payment records from MLS Recon or Cybersource through a web service (WCF), and IMBA, CRNL, and SOLAR create e-check records.

7.13.2 BRMS - BRMS/Unified Business Identification

The Business Registration Management System is the primary system of the tax registration record for Washington business. The system is based in the DOR HP mainframe. The UBI number generation is a function within BRMS. When a new business applies for registration and licensure through BLS, a BLS operator will cause a UBI number to be issued from the BRMS UBI number function. The BLS system uses the UBI number (along with the Business ID and Business Location ID extensions) as the primary business account identifier. For a new UBI number, the IBLA system will access the UBI generation process under a limited set of conditions in order to have the UBI number issued immediately for an online application, otherwise the number is issued as the BLS operators complete the processing review of the online applications in the BLS system. BLS sends updates to BRMS in the way of Agency indicators and ARDs. In reverse, BRMS submits bulk tax account status updates for the BLS records.

7.13.3 IDOCS – DOR Internal Documents

If BLS staff identify an address change that should be sent to DOR, they indicate this on the BLS IBM Mainframe solution. This indicator is used to create a batch process that sends document images from the BLS system to the DOR IDOCS workflow. This process allows DOR staff to review the document and determine if the address change in BLS requires an address change in BRMS.

7.13.4 Other interfaces:

A number of other interfaces exist, or are accessed in the current BLS environment. The following is a brief description of each:

- Right FAX – 3rd party fax management solution
- CyberSource – 3rd party credit card processor
- US Bank Lockbox – US Bank processing of paper renewals
- City Partners – Cities for which BLS processes license applications and renewals
- Partners with electronic interface – Organizations that directly interface with the BLS IBM mainframe system

7.14 Technology Stack

The BLS technology stack at DOR is primarily a Microsoft/.net environment set on HP Proliant servers. Scanning capabilities are provided by two (2) Kofax scanners. Network infrastructure is primarily CISCO. WA BLS environment interfaces with the IBM systems (CTS) and the Tandem (DOR on the HP Nonstop) but does not maintain those systems. BLS application development includes Natural, Java, and .Net.

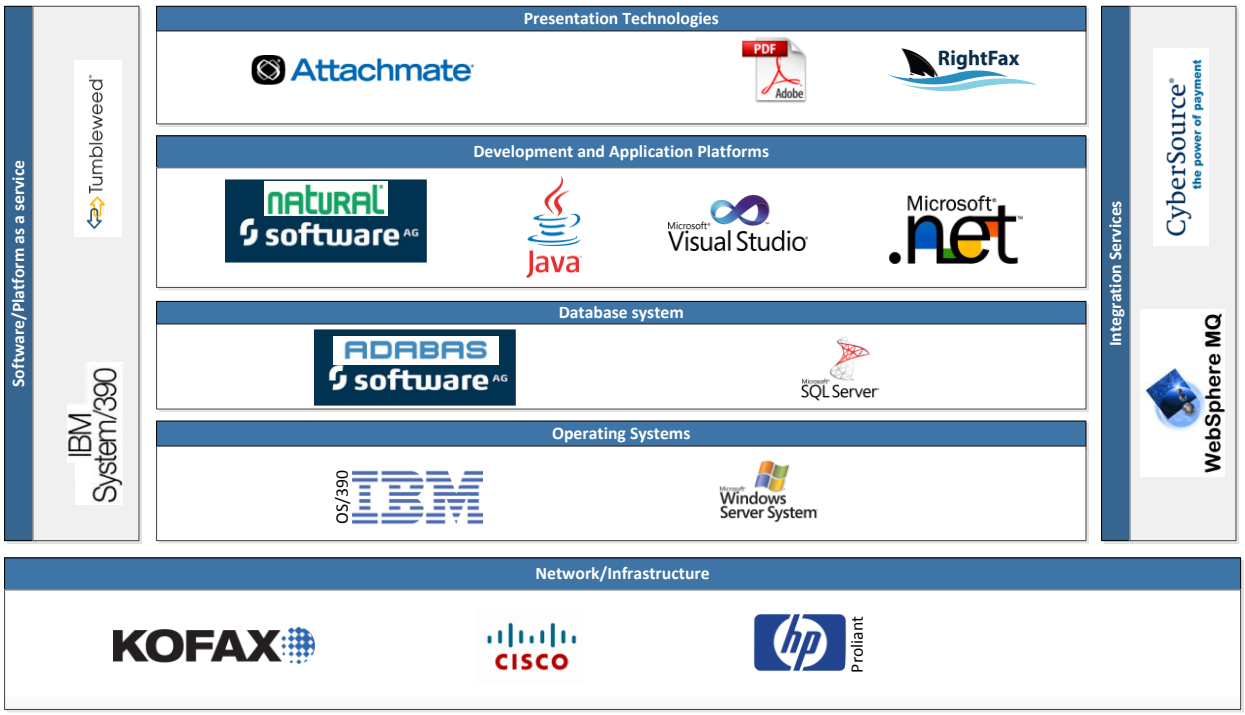


Figure 7.10 – Technology Stack

Server Information

The BLS sub-systems are hosted on the DOR technical infrastructure. The DOR environment includes 265 total servers of which 149 are VMware virtual servers and 116 are physical servers. Built on the HP Proliant line, this server environment is minimally impacted by the BLS's 2 physical servers and 10 virtual servers. Additionally, communication and controls for the BLS system leverage or pass through 11 other servers. These 23 servers represent less than 10% of the overall server environment at BLS. Expansion of the server capacity is fully within the capability of the DOR environment. Continued improvement to the internal network should be capable of handling a sizable server growth if needed by the replacement solution. (See appendix for BLS Server detail.)

7.15 Current technical state observations

The following table ranks the existing BLS sub-systems with respect to the Replacement Objectives identified in the BLS study. The relative value of leveraging existing BLS sub-systems in any proposed replacement option is assessed. Very few of the existing systems offer significant value in achieving the Agency's objectives. However, some minimal benefits can be achieved on the individual sub-system

level. Figure 7.11 describes the initial observations while the two following tables describe the rating and objectives.

No.	WA DOR BLS Replacement Objectives	BLS IBM Mainframe	BLS Image Viewer	BLS Image Viewer Web	BLS Imaging	WALI Viewer	Washington Licensing Information reports	Business License Lookup	Business Licensing Guide	Help Admin	License Query Hierarchy System	Business License Service Administration	Business License Application (IMBA)	BLS Online Location Renewal System	Business Location System (SOLAR)	Internet Business License Application	Internet Corporation and Limited Liability Renewal	Corporate Renewals
1	Reduce risk and maintenance costs	L	L	L	L	L	L	L	L	L	L	L	M	M	M	M	M	M
2	Provide more desirable features	L	L	L	L	L	L	L	L	L	L	L	M	M	M	M	M	M
3	Make the system more extensible, scalable, and maintainable	L	L	L	L	L	L	L	L	L	L	L	M	M	M	M	M	M
4	Improve usability for staff, state and city partners and businesses	L	L	L	L	L	L	L	L	L	L	L	M	M	M	M	M	M
5	Increase access to a larger IT workforce trained on new technologies and tools	L	L	L	L	L	L	L	L	L	L	L	M	M	M	M	M	M
6	Improve financial processes and internal controls	M	L	L	L	L	L	L	L	L	L	L	M	M	M	M	M	M

Figure 7.11 – BLS Replacement Objectives Rating – Initial Observations

	Sub-system Value Rating
L	The technical aspects of this sub-system, if used in current configuration and enhanced in the current maintenance process will yield LOW benefit in accomplishing the objective
M	The technical aspects of this sub-system, if used in the current configuration could easily be enhanced to achieve MEDIUM improvement on this objective
H	This technical aspects of this sub-system meets this objective and could be leveraged to gain HIGH levels of improvement

BLS replacement objectives	Objective Description
1. Reduce risk and maintenance costs	• Risks associated with license system uptime, license service performance, and expansion • Maintenance costs associated with equipment, patching, and testing
2. Provide more desirable features	• Desirable features: Integration capabilities, workflow management, performance measurements, open architecture, shared content, support for data services and business services, user interface
3. Make the system more extensible, scalable, and maintainable	• Extensible: Designed to include hooks and mechanisms for expanding/enhancing the system with anticipated capabilities without having to make major changes to the system infrastructure • Scalable: Ability to handle larger volumes with little or no change to the architecture or configuration • Maintainable: Options for maintenance, skill availability, and stability of the solution
4. Improve usability for staff, state and city partners and businesses	• Business usability: Browser-based, configurable and flexible options, self-service and improved performance (real-time or near real-time).
5. Increase access to a larger IT workforce trained on new technologies and tools	• New technology and tools skill sets: Technology is new enough and common enough to be represented by a large resource pool, easily accessible training programs and support by multiple vendors.
6. Improve financial processes and internal controls	• Financial process improvement including workflow, check points, audit trails, reconciliations, separation of duties, risk mitigation, reports, and system provided internal controls: Ability to better manage fees, cashiering, check handling, electronic deposits and collection of license fees while minimizing risk to error and theft of BLS revenue.

7.16 Assumptions

- All location, configuration, functional, and financial analysis is based on the data provided by DOR/BLS for this study. While we made significant efforts to ensure accuracy, no attempt was made to validate the data provided.
- All solution, network, and server sizes are reasonable estimates based on workload complexity, data integrity and utilization estimates and will require further validation depending on selected replacement strategy and direction.
- A general assumption was made that adequate WAN/LAN bandwidth exists to support all proposed consolidated workloads, new application platforms and replacement strategies. A more detailed analysis/assessment is advised if deemed applicable during visioning phases. This was based on an interview with network/infrastructure staff and the scope of BLS in comparison to the overall utilization and infrastructure of DOR.

7.17 Strengths

The BLS System has the following strengths:

- Web presence – BLS has web applications and is in fact a considerable portion of the BLS system.
- DOR has a good grasp on development and deployment techniques – These best practices (used by DOR) are being incrementally implemented by the BLS development and maintenance groups (e.g., end to end testing, version control, templates/patterns and adoption of Java and .Net application frameworks).
- Skills in house – DOR has recruited, increased, and retained skilled staff in the area of web development, online applications and some web service skills.
- Network – DOR has an established plan for maintaining and maturing the network and network security. Network and Infrastructure verbally communicated strategies and plans for continued growth and improvement in the DOR internal network including documentation, cost management, system refresh models and clear strategy for the next 1-5 years.
- Security and Performance – The DOR network is sufficient to meet or exceed BLS expansion and target models.
- Overall System Stability – For the duration of the BLS replacement effort, the existing systems are fairly stable and could work with "in-flight" BLS replacement options.
- Subject Matter Expertise – Experts that participated in the migration are still available for the replacement visioning, procurement, design and deployment.
- Capacity – DOR server, network, imaging, and security capacity exceeds the required capacity for BLS replacement. Additionally, storage for license images and information is available for the BLS replacement.
- DOR Systems are in place to accept additional license cash management and online transactions.

7.18 Weaknesses

- The BLS system and sub-systems are difficult to augment or modify due to: siloed applications development and maintenance, regression testing, and variation of development environments.
- The BLS system does not offer Partner interfaces that are flexible or modern (for example: service oriented, or open standards)
- Data redundancy – Business/Corporation data (entity, address, location, etc.) is spread across BLS and BRMS creating synchronization issues that lead to reduced data quality. This problem also exists outside DOR/BLS to other agencies that manage Business/Corporate information.
- Manual work-around for information updates are required (bulk change, emails to update addresses, etc.).
- Connections required with IBM mainframe limit modern features, real-time processing, master data management and overall information quality.
- Development skills and techniques are siloed and not standard across the department. There is a need for communication, collaboration and standardization across the BLS.

7.19 Change opportunities

- Data quality issues due to manual interfaces and redundant data storage should be changed so that the BLS information is not contained in ADABAS
- Lack of agility that is required when implementing new licensing programs, legislation, and enhancements
- Multiple siloed solutions to update when changing business rules or processes

8 Costs

The BLS program costs will be used during the Alternatives Analysis and Implementation phases as a component of the cost/benefit calculation. To determine the current BLS program costs, DOR provided RSI with the FY13 BLS Adjusted Allotments report. The report provided contains a breakdown of the BLS costs by DOR division, and this detail may be used in the future. RSI placed the summary costs into the OCIO cost/benefit template, in Figure 8.1 below, and these will be used throughout the project.

		FY13
OPERATIONS COSTS	Obj. Codes	Current
Salaries and Wages	(A)	2,558,900
Employee Benefits	(B)	949,300
Communications	(EB)	142,000
Hardware Rent/Lease	(ED)	192,500
Hardware Maintenance	(EE)	10,500
Software Rent/Lease	(ED)	0
Software Maintenance & Upgrade	(EE)	0
DP Goods/Services	(EL)	355,500
Goods/Services Not Listed	(E)	1,638,700
Travel	(G)	15,000
Hardware Purchase Capitalized	(JC)	268,500
Software Purchase Capitalized	(JC)	0
Hardware Purchase - Non. Cap	(KA)	0
Software Purchase - Non. Cap	(KA)	0
Hardware Lease/Purchase	(P)	0
Software Lease/Purchase	(P)	0
Other (specify)	(N)	750,000
TOTAL OPERATION COSTS		6,880,000
FTE'S		55.5

Figure 8.1 FY13 BLS Adjusted Allotments Summary

9 Appendix A – Stakeholder Survey

The attached files contain the summary and detailed responses from the Stakeholder Survey.

Survey Summary

Survey Details

10 Appendix B – BLS Server Detail

Server	Virtual Physical	Type	OS	CPUs	RAM	Other SW/ Agents	Purpose
Server 1	V	Web Server	MS WS 03	2	2048	Patching Backup	for access by agencies within the State Government Network (SGN)
Server 2	V	Web Server	MS WS 03	2	2048	Patching Backup	for access by agencies within the SGN
Server 3	V	Web Server	MS WS 03	2	2048	Patching Backup	for access by agencies within the SGN
Server 4	V	Web Server	MS WS 03	2	2048	Patching	internal servers; web services
Server 5	V	Web Server	MS WS 03	2	2048	Patching	internal servers; web services
Server 6	V	Web Server	MS WS 03	2	2048	Patching	internal servers; web services
Server 7	P	Web Server	MS WS 03	2	4194	Patching	internal servers; web services
Server 8	P	Web Server	MS WS 03	2	4194	Patching	internal servers; web services
Server 9	V	Web Server , WebSphere MQ	MS WS 03	2	2048	WebSphere MQ Patching	Used by BLS only
Server 10	V	Web Server , WebSphere MQ	MS WS 03	2	2048	WebSphere MQ Patching Backup	Used by BLS only
Server 11	V	Web Server , WebSphere MQ	MS WS 03	2	2048	WebSphere MQ Patching Backup	Used by BLS only

Server	Virtual Physical	Type	OS	CPUs	RAM	Other SW/ Agents	Purpose
Server 12	V	Web Server	MS WS 03	2	2048	Patching	for BLS web apps currently secured behind the FortressAnonymous (managed by CTS Agency)
Server 13	V	Web Server	MS WS 03	2	2048	Patching	for BLS web apps currently secured behind the FortressAnonymous (managed by CTS Agency);
Server 14	V	Web Server	MS WS 03	2	2048	Patching	for BLS web apps currently secured behind the FortressAnonymous (managed by CTS Agency)
Server 15	V	Web Server	MS WS 03	2	2048	Patching	for BLS web apps currently secured behind the FortressAnonymous (CTS Agency)
Server 16	V	Web Server	MS WS 03	2	2048	Patching	for BLS web apps currently secured behind the FortressAnonymous (CTS Agency)
Server 17	V	Web Server	MS WS 03	4	3584	CiscoSecurity Backup Patching Unisys ClientAPI Jspell NonStop ODBC CDO	Intranet - for web apps only access within DOR network
Server 18	V	Web Server	MS WS 03	4	3584	CiscoSecurity Backup Patching Unisys ClientAPI Jspell NonStop ODBC CDO	Intranet - for web apps only access within DOR network

Server	Virtual Physical	Type	OS	CPUs	RAM	Other SW/ Agents	Purpose
Server 19	Blade	Web Server	MS WS 03	2	4096	CiscoSecurity Backup Patching Unisys ClientAPI Jspell NonStop ODBC CDO	Intranet - for web apps only access within DOR network
Server 20	V	Web Server	MS WS 03	2	2048	Patching Subversion	for internet content and non-secure web apps
Server 21	V	Web Server	MS WS 03	2	2048	Patching Subversion	Internet - for internet content and non-secure web apps
Server 22	V	Web Server	MS WS 03	8	2048	Patching Subversion Cisco Security Backup	Internet - for internet content and non-secure web apps
Server 23	V	Web Server	MS WS 03	8	2048	Patching Subversion Cisco Security Backup	Internet - for internet content and non-secure web apps
Server 24	V	Batch Processing	MS WS 03	1	1024	Cisco Security GNU PG WS FTP Pro Patching NonStop ODBC Unisys ClientAPI CyberSource API	Server for batch processing; not an FTP/SFTP server; uses Windows Task Scheduler to schedule/run job

Server	Virtual Physical	Type	OS	CPUs	RAM	Other SW/ Agents	Purpose
Server 25	V	Batch Processing	MS WS 03	2	2048	Cisco Security GNU PG WS FTP Pro Patching NonStop ODBC Unisys ClientAPI CyberSource API	Server for batch processing; not an FTP/SFTP server; uses Windows Task Scheduler to schedule/run job
Server 26	P	AD lookup/Batch processing	MS WS 03	2	4096	Patching	Pseudo domain controller; need for program to access Active Directory group in other agencies
Server 27	P	SQL Server (2005)	MS WS 03	2	8388	Patching Backup SQL Server 2005	test and demo database
Server 28							cluster for BLS SQL Servers
Server 29	P	SQL Server (2005)	MS WS 03	2	33544	Patching Backup SQL Server 2005	SQL Server for BLS applications
Server 30	P	SQL Server (2005)	MS WS 03	2	33544	Patching Backup SQL Server 2005	SQL Server for BLS applications
Server 31							cluster for public non-secured databases.
Server 32	P	SQL Server (2005)	MS WS 03	2	16777	Patching Backup SQL Server 2005	SQL Server for the public non-secured databases
Server 33	P	SQL Server (2005)	MS WS 03	2	16777	Patching Backup SQL Server 2005	SQL Server for the public non-secured databases
Server 34	V	FTP/File server	MS WS 2000	2	2048	CiscoSecurity Backup Patching	
Server 35	V	FTP/File server	MS WS 03	2	2048	Backup Patching	FTP server for programs on the IBM and Tandem; files storage server

Server	Virtual Physical	Type	OS	CPUs	RAM	Other SW/ Agents	Purpose
Server 36	V	File Server	MS WS 03	4	7960	Backup Patching	File server to store BLS documentation, image files
Server 37	V	Kofax Scanning/Imaging	MS WS 03	2	4096	Patching	

11 Appendix C – BLS Sub-System detail

Application	Function	.NET Version	Acronym	Created	Interfaces	Language	Reporting	Sensitivity of Information	Web Services
BLS IBM Mainframe	Provide storage, accessibility and processing of Centralized Business license Information accessible by BLS, DOR, and partner applications for the management of all BLS master data		BLS IBMMF		SFT, Terminal emulation, WebshereMQ	Cobol		Confidential	
BLS Image Viewer	Application used by BLS staff to view completed applications (internet and paper)	.NET 2.2 - 4.1	BLS IV			ASP.NET, VB			MSLImage Proxy
BLS Image Viewer Web	External application used by BLS Staff and State Partners to view completed applications (internet and paper)	.NET 1.0 - 4.0	BLS Web			ASP.NET, VB, C#			MSLImaging WCF
BLS Imaging	Application use to scan documents, send information to the BLS IBM mainframe, and receive information back.		BLSI		SFT				

Application	Function	.NET Version	Acronym	Created	Interfaces	Language	Reporting	Sensitivity of Information	Web Services
BLS Online Location Renewal System	Renewal of City and State licenses for an individual or Corporation. System of Online Location Application Renewal (SOLAR) is used to renew location business licenses. Note: Corp or LLC entity licenses are excluded from SOLAR.	.NET 1.0;#.NET 1.1;#.NET 2.0;#.NET 3.0;#.NET 3.5;#.NET 4.0	SOLAR	6/30/2011	IBM, Cybersource, Epms	C#;#VB6		Confidential	EPMS, MQ, HelpAdmin Survey Service, Webshere, MLSImaging Service; Cybersource web site and DOR Cybersource return web site, HP, IBM
BPD Admin			BPD						
Business License Application	Online application used by the public to apply for state and city licenses, registrations and permits available through BLS.	.NET 1.0;#.NET 1.1;#.NET 2.0;#.NET 3.0;#.NET 3.5;#.NET 4.0	IMBA	6/30/2011		C#;#VB6			EPMS, MQ, SurveyService; Uses Cybersource
Business License Lookup	Public license information lookup - Includes business location information, governing people, registered trade name, licenses, etc.		BLL						

Application	Function	.NET Version	Acronym	Created	Interfaces	Language	Reporting	Sensitivity of Information	Web Services
Business License Service Administration	Application used by BLS Staff and state agency partners staff to view IBLA, SOLAR and ICRNL internet complete and incomplete applications, audit trail, statistics, survey, credit card search, etc. Also has the function to add generic city partners into IBLA.	1.0-4.0	BLS Admin		ICRNL, Solar, IBLA	ASP.NET, VB, C#			
Business License System		.NET 1.0;#.NET 1.1;#.NET 2.0;#.NET 3.0;#.NET 3.5;#.NET 4.0	BLS	3/15/2011		C#;#VB6			
Business Licensing Guide	Online tool used to determine licensing contact information and forms required to setup a business.		WALI/BLG	6/30/2011					
Corporate Renewals		.NET 2.0;#.NET 3.0;#.NET 3.5;#.NET 4.0	CRNL	6/30/2011		C#		Confidential; #Sensitive	EPMS, MQ, SurveyService; Uses Cybersource
Help Admin	Internal application used to maintain the "Help" content of IBLA, SOLAR and ICRNL.		Help Admin		ICRNL, Solar, IBLA				

Application	Function	.NET Version	Acronym	Created	Interfaces	Language	Reporting	Sensitivity of Information	Web Services
Internet Business License Application			IBLA		MLS Export, Help Admin, BLS Admin				
Internet Corporation and Limited Liability Renewal	Online service provided on behalf Secretary of State. Application is used by external users to renew legal entity licenses (Corporations, LLC and Massachusetts Trust)	.NET 2.0;#.NET 3.0;#.NET 3.5;#.NET 4.0	ICRNL	6/30/2011	IBM MF, Viewers, BLS Admin, MLS Export	C#		Confidential; #Sensitive	EPMS, MQ, SurveyService; Uses Cybersource
Right Fax	Application used by WALI to fax guide sheet and forms.		none		WALI				
WALI Viewer	Internal application used by BLS staff to support requests from customers (counter and phone). Administration functionality used to maintain/update business rules.		WALI	6/30/2011	BLG	VB6, COM, ASP Classic			
Washington Licensing Information reports	Produce License reports from WALI Statistical information		WALI Reports						

12 Appendix D – BLS Acronyms

A8 - Standardized form for Cash Receipts Journal Summary Report used by OST
AGR - Washington State Department of Agriculture
ARD - Agency Required Documentation
BLG - Business Licensing Guide
BLS - Business Licensing Service
CRRS – Cash Receipts Reporting System
BRMS - Business Registration Management System
EPMS - Electronic Payment Management System
ESD - Employment Security Department
FTP - File Transfer Protocol
IAP – Inter-Agency Payment
IBLA - Internet Business License Application
ICRNL - Internet Corporation and Limited Liability Company Renewal
IDOCS - Integrated Document System
LCB - Liquor Control Board
LNI - Washington State Department of Labor and Industries
LQS Hierarchy - License Query Hierarchy System (Business License Look-up)
NAICS - North American Industry Classification System
NSF - Non Sufficient Funds
OST – Office of the State Treasurer
RRS – Revenue Receipting System
SFT – Secure File Transfer
SOLAR - BLS Online Location Renewal System
SOS - Office of the Secretary of State
UBI - Unified Business Identifier
UST - Underground Storage Tanks
WALI - Washington Licensing Information System